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## Ron Grob's Lancair ES Flies



*By Ron Grob*

**N**711RG, my Lancair-ES, was airborne for the first time on September 21. The test pilot, Dave Allen, is a former air force fighter pilot, air show aerobatics pilot, and professional test pilot with over 4400 hours of flying time in everything from F-16's to

Glassairs, and even had 50 hours in a Lancair-ES before flying mine. He is very thorough, and as you will see, that really is a good thing.

Prior to the first flight, Dave looked in every nook and cranny, marked bolts and nuts to be able to

*(continued on page 2)*



**When:** November 5, 2002 • 7:30 PM  
**Where:** Hair Dynamics, 6464 S. College, Ft. Collins, CO 80525  
**Program:** Speaker to be determined

**First Flight-** *(continued from page 1)*

see if they loosened after the first flight, and tension-tested the flight controls, among other things. When Chuck Brenner (the mechanic who has been working on my plane since I finished working in my garage at home) held onto the rudder and Dave stepped hard on a rudder pedal, we heard a loud “bong.” A helper of Chuck’s had not properly squeezed a Nico-Press fastener onto one of the rudder cables, and it let go. Although the other cable was similarly tested, it did not let go until after taxiing out the first time, requiring an ignominious tow back to the hangar. Thankfully, it happened on a taxiway and not in the air! Dave also found that it was not possible to fully deflect the rudder pedal and still have full use of a brake. That problem was fixed by sawing out some of the PVC tubing for the heating system that was in the way (not really needed in that area). The brakes were “spongy,” so they needed to be bled out again.

Finally, Dave felt that the plane was ready, put on his crash helmet and parachute, and after a lengthy runup, he took off. Chuck and I were taking pictures and a video, and Dave had a digital video camera attached above the right front seat to record the entire flight. Dave climbed up to just below 7000 feet to stay below the Class B airspace for DIA, and circled about 4 times, then departed the

area. He flew for an hour, while Chuck and I waited in the terminal building like fathers outside a delivery room. The landing was uneventful, and Dave



*Ron Grob (right) and Chuck Brenner (above) are pretty pleased with the first flight.*

congratulated me for being the owner of a great airplane. He said that when trimmed up at cruise, it flew hands-off. In order to break in the overhauled Continental IO-520 engine, Dave ran at 2600 rpm, and reported about 180 knots indicated at 8000 feet, with the main gear wheel pants removed. Needless to say, it was pretty exciting to see the plane that Chuck and I had worked on for over 8 years finally in the air.

Dave’s only complaints after the first flight were that a couple of voice warnings for the angle of attack indicator and for the fuel system were pretty annoying until he found the circuit breakers and pulled them. The angle of attack indicator needed to be calibrated in the air,

and the capacitive fuel gages had to be calibrated one tank at a time by using up all usable fuel, then filling and “marking” in the program for each 2 gallons of fuel added. Once calibrated, the fuel gages are extremely accurate. The calibrations were done on subsequent flights.

Before the second



flight, the engine would not start. It was decided that the two batteries were too small, so Chuck located some larger ones and installed them. The next day, the engine started just fine, but the prop pitch control failed to work properly, so the planned four hours of flying were scratched. The prop governor was faulty.

There have been numerous problems with the engine, including a failed auxiliary fuel pump, both primary and secondary alternators, the prop governor, and one hydraulic lifter. All

*(continued on page 4)*

## SONEX SEAT BELTS HOLD DURING CRASH

### Pilot Gets Ejected

By Jack Lockamy  
Submitted by Hugh Beckham

As promised, I am taking this opportunity to report some findings on my "ejection" during the crash of my Sonex on Sept. 8, 2002.

I am well enough to drive again. I finally made it to the hangar yesterday to view the wreckage of N164JL. I examined the seat belts first. The pilot side seat belt was STILL BUCKLED in the crash position. The seat belt attachment points HELD! I believe that if I had been wearing the shoulder harness, I would NOT have been ejected. I also would not have used the right side of my face to rearrange the vertical compass card installed on top of the glareshield. It was bent pretty badly. I have approx. 50 stitches to prove it.

Based on eyewitness reports, and discussion with the FAA rep. doing the accident report, here is what we believe happened during the crash. The engine lost power at 400 feet AGL. An immediate left turn was made to attempt landing on the parallel taxiway south of Runway 25. Glide speed was established at 85-90 MPH (winds were 260/13 KTS). The left wing tip and left main gear simultaneously hit plowed dirt next to the taxiway. The plane

went up on the nose and continued a cartwheel over to the right wing tip. I was ejected to the right of the plane, and at this point it rolled over me (blood on belly). It continued right, sliding backwards, bending the tailwheel into the lower portion of the rudder, and bending the right landing gear. The plane continued backwards on the gear a total of 165 feet from the point of impact. I ended up 135 feet from the impact point (hence all the road rash).

As reported earlier, the Sonex held up extremely well during the crash. I believe there was only ONE cartwheel, not 3 or 4 as earlier reported by eyewitnesses. I have been in contact with Sonex-LTD and Pete Buck (co-designer and author of Sonex plans). Pete asked to view the wreckage to see if there were any areas that needed to be addressed, and to assess the damage. Pete and I will be getting together Oct. 12th to view the damage.

Conclusion: The Sonex is one strong and safe aircraft. The seat belts and attachment points worked. WEAR THE SHOULDER HARNESS!!! I would probably have been able to walk away from this accident and not have sustained any facial damage, LOTS of road rash, a dislocated left hip, 4 broken ribs, and a punctured right lung had I been wearing them. The lap belt held. However during a violent crash such as this, you can literally be pulled or slid out of the lap belt and ejected. Ask me how I know. ■

## Chapter 515



### TOOLCHEST

Here is a list of tools and equipment either owned by the chapter or available for use by members.  
**CONTACT:** Walt Ellwood, 635-3436, wellwood1@compuserve.com

Engine hoist  
Flat bed trailer  
Instrument panel hole cutter  
Nico press, with gauges  
(bolt cutter style)  
Scales  
Stoves  
Torque wrench

Tools that members may loan out  
Lycoming Engine Overhaul Stand  
(Mel Callen, 587-4824)--may work with a Continental  
Cable Fitting Swaging Tool  
(Hugh McTeague, 586-5910)

## REMEMBER

### New Meeting Location

Our new meeting place is at Dale Matuska's place of business, which is:

Hair Dynamics, 6464 S. College, Ft. Collins, CO 80525 on the east side of Highway 287, (S. College), just a little north of Trilby Road.

Use the north building entrance (well marked) and park your car in the north parking lot. The meeting room is up the outside staircase to the second floor.

Dale will be there at 7:00 PM for those who wish to hang out and talk before the meeting.

# EAA Hospitality

## A Recent Experience

by Dean Hall

I recently flew the -4 to Cincinnati. There was a fairly good tail wind and so I made it to Keokuk, Iowa on the Mississippi River for the gas stop. I arrived just before noon on a Sunday and the gas boy had gone to lunch. I had learned this from an older guy who was getting ready to fly out with his wife in their C-172 to a local fly-in. My next question was, "How can I get a hamburger?" He reflected only a moment, and then responded, "Here are the keys to my car, it is right over there, and the fast food restaurant row is thataway" whereupon he continued his preflight.

I parked the car where it had been, left the keys where he designated and left my card with a thank you note. That is what the EAA is really all about. It doesn't get any better. Thank goodness for small town Midwest people.

**First Flight** - (continued from page 2)  
were brand new items. Installing the fuel pump in the cockpit, as recommended by Lancair, where it is ahead of any fuel filter, may have caused the failure. We found a small bead of epoxy in the fuel filter bowl that could have caused a vane to fail in the pump. The voltage regulator on the primary alternator and the field windings on the secondary alternator were faulty. It was also determined that the light-weight starter is just that. It had trouble getting past the first cylinder when starting. We are replacing it with a larger, certified starter, which should be more reliable.

When Dave emptied the left tank in order to calibrate the fuel gage, the engine did not re-start when changing to the right tank. After two unsuccessful attempts to use the boost pump, Dave was looking to see where he would land on I-70 when a third attempt succeeded. Whew!

Dave had us remove the wheel pants prior to the first flight, and that turned out to have been a mistake. When Dave was exploring higher speeds, one gear leg fairing decided to part company with the airplane, and is now in some field around Limon. As it left, it damaged one brake, so upon landing, there was a sudden pull to the right. I'm glad that Dave was flying. The ES may have ended up in the weeds if I had been. When Chuck ordered another fairing from Lancair,

they told him that 4 or 5 others had the same experience. The fairings are kept in their proper orientation to the slipstream by the wheel pants, and at over 200 knots that is important. It would certainly have been nice if they had bothered to mention that to all of the builders. Of course, they sell more parts this way.

When the hydraulic lifter failed, the engine ran very rough. It happened at the very worst time, after a touch and go, and after it was too late to abort and land again on runway 26 at Front Range. Dave managed to climb to about 100 feet, circle around to the midpoint of runway 35 to land, and shut down. After that adventure, we all decided that it was time to fix everything that is known to be wrong before flying the ES again. It should be flying again by early November.

It turns out that the Lancair numbers for stall speed, etc. are wrong, and it is a good thing that Dave discovered that prior to the flight when the engine ran rough. He said that if he had held 80 knots, instead of 90, he might well have spun in. Also, ten degrees of flaps are needed for best glide. Dave said that the angle of attack indicator works great, and will help keep me out of harm's way.

Dave uncovered some "aggressive" stall and spin characteristics and he is going to make that information available to all ES flyers and builders. When doing a deep stall, using the

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**First Flight** - (continued from page 4)

rudder to hold course, he went inverted. When doing spin entries, he was able to pull out in a quarter turn all right, but when attempting to hold the spin for a half turn, it quickly wound up to a 3 turn spin requiring fast control input to recover. The ES would not pass testing for certification. This explains why the FAA required big changes in the wing of the Lancair Columbia 300, the certified version of the ES.

Once everything is fixed, Dave will fly off the balance of the 40 hours in the proscribed area of eastern Colorado (Colorado Springs to Greeley to Wray, near the Kansas border, and back). Then, my insurance company requires that Dave must check out Don Smith, who has over 12,000 hours and is a retired airline captain, and who will be my flight instructor. Then, Don needs to fly 10 hours solo in the ES before he gives me dual. I must then get ten hours of dual and fly 10 hours solo before carrying my first passenger. I hope all of the engine problems are resolved before I fly solo. Hopefully, sometime this year I will have a thoroughly tested airplane in my hangar, but it won't be painted until later.

If you are an average private pilot like me, I highly recommend that you hire a professional test pilot to test fly your homebuilt airplane. Dave Allen's fees are really low when I consider what could have happened to my ES or to me if I had been the test pilot.

## Bald Eagles Eat & Fly

### Annual Chapter Picnic a Success

by Larry Drake

Some had their doubts about the chapter's annual outing taking place. The weather man didn't seem too optimistic and there were very few RSVP responses from the members. Always positive, chapter VP Milo Smith, ordered food for sixty people, relying on the tact, "feed them and they will come." And, come they did.

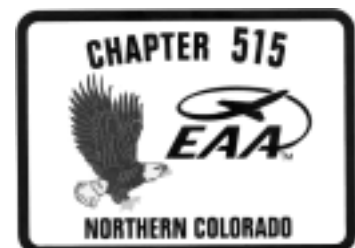
Saturday, October 5th, dawned a clear crisp day. People began arriving at the Fort Collins/Loveland Airport Terminal about 9:00 am as a few planes taxied in. By 9:30 airplane rides were in full swing. As I recall, there was a Glastar, Piper Clipper, Rans Coyote, Cessna 172, Bonanza, and others giving rides. Hugh Beckham had his Sonex on static display and I had my RV-1 (single seat) setting beside it. An Extra roared in and joined the group for everyone to drool over. His exit was equally spectacular.

A lot of people got rides, including me. I finally got a ride in Mel Callen's Glastar. Mel was flying rides from the moment he got there and long after I left a 1:00 pm. He and the

other pilots contributed a lot of time and expense so that the rest of us could share in their experience. Mel gave me a great ride out over the eastern plain, with a touch and go at his grass airstrip thrown in just for the fun of it. That is what Bald Eagles day is all about. It makes me wish I had an extra seat in my little bird.

The food showed up on schedule, just as Milo had promised. Hot dogs, sloppy joes, potato salad, chips, great cookies, root beer, all you could eat. We sat around on the airline terminal chairs and shared hangar stories as we ate. Not quite as accommodating as a real hangar, but with the chilly weather it was good to be inside.

"Oh, no! I forgot my camera!" hit me between the eyes when I suddenly realized that this event needed to be shared in the newsletter. There was not a camera in sight. Sorry, no pictures to accompany this account. But, believe me, a good time was had by all and can be counted as a complete success.



# EAA Chapter 515 Newsletter

*c/o Larry Drake (publisher)  
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EAA Chapter 515 Newsletter

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## Put it in the Newsletter!

stories • announcements • ads

Send text and/or pictures to:

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### **CHAPTER MEMBERSHIP ANNUAL DUES:**

**amount: \$18/year**

**due: January 1, 2002**

**pay to: EAA Chapter 515**

*bring your dues to the Chapter  
meeting or send them to:*

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