



## Top 10 Greatest Pilots Throughout History

*Selected by All Care Ambulance*

**#10: Chesley 'Sully' Sullenberger**  
**Country: United States of America**  
**Lives: 1951 – Present**

We must mention Chesley 'Sully' Sullenberger in our list, as he is a modern-day hero for his expert aviation skills. From 1973 to 1980, he was a fighter pilot in the United States Air Force. After this, Sully



Airways in became a commercial pilot for Pacific Southwest 1980. He also has been an accident inspector and a safety chairperson with the Air Line Pilots Association during his career. On July 15, 2009, Sully had to put all his safety training to use when a flock of Canadian geese struck his US Airways airliner, flight 1549, during liftoff and damaged both engines. Sullenberger had to decide quickly the best way to land the plane to save his passengers. He decided that his only course of action was to perform an emergency water landing in the Hudson River. All 155 passengers survived with just a few suffering injuries. In true captain fashion, Sully exited the plane last.

*Ed. Note: More to follow in future issues. Do you have any nominations you want to make?*

### Welcome New Member Dave Hougland

Hi I'm Dave Hougland. I just joined EAA this summer following my April purchase of a 1946 415 C Ercoupe. I was talking with Dr. Krafka this summer and he said I should join the vintage chapter of EAA for tips on bringing my old bird back to life ( it is a project and has not flown for many years). This led me to the local chapter and joining recently. I took pilot training near Iowa City, Iowa in 1991, and became a private pilot. I moved to Rapid City for a job as a Nuclear Medicine Technologist. Sad to say I have not flown since receiving my private pilot. Kids are grown, project under way, time to get back to a long delayed passion!

*This from Al Neal:*

'all be putting a large collection of aviation magazines in the club house, If anyone want them, just take them. Anything left after a few meeting I'll trash them. I will also put out all my pilot gear, books, AC's, aircraft misc. that can be had for free or donation to the club. It will take me a little time to get that stuff collected. If interested in collectable die cast aircraft collection contact me. Moving to WESTHILLS in about a month. Molly you can do what ever you want with this info. Al

---

### [How To Safely Reduce The Radius Of Your Turn—In Case You Need To](#)



*What if you had to turn right now?*

---

**Next Meeting:**  
Tuesday, March 10  
At WREA Building

**6:30 Hangar Talk**

**7:00 Program**  
**TBA**

**meeting**

If anyone has ideas for programs, please contact  
Josh [jscott\\_09@iCloud.com](mailto:jscott_09@iCloud.com) or Arie  
[ariemichael1@aol.com](mailto:ariemichael1@aol.com)

## Upcoming Events

### **AOPA Fly-In**

June 19 & 20 Casper WY

### **Let Freedom Fly " Air Show**

July 4<sup>th</sup> Pierre Regional Airport  
Royal Canadian Air Force Snowbirds (and others) will be performing

### **Ellsworth AFB Air Show**

July 25 & 26  
The Thunderbirds will be performing.

*(more details will follow)*

### **Officers**

President	Josh Scott
Vice President	Arie LaCroix
Secretary	Gary Schroeder
Treasurer	Dan Benkert

### **Volunteers**

Newsletter	Molly Benkert
Web Manager	Molly Benkert
Young Eagles	Darrel Sauder
Safety Officer	Jerry Densmore
Tech Advisor	Jerry Densmore

# February Minutes

by Gary Schroederr, Secretary

The meeting started at 7:03

Josh started the meeting with the EAA video magazine.

Rick told us about the new Chelton/Garmin avionics in the RV 10.

Guests were Shawn Milke and Dave Houglund.

Josh was contacted for a Young Eagles ride for a young girl who would like to be a pilot, and asked if there was a pilot that could take her for the ride.

Josh asked about projects in the chapter, so members gave updates on their projects.

Josh felt our chapter needs more of a social media profile, and his son is going to help with this with things like Facebook and Instagram etc.

There is an air show planned for the Fourth of July at the Pierre airport.

There is a suggestion for members to show their projects to the other members as a weekend chapter activity.

Bert Corwin give us a report from the GA committee—

—The airport plans to raise ground lease rates and there will be hearings at the Rushmore Plaza on February 25 for public input.

—We need to get general aviation members on the airport board or we won't have any input on airport decisions.

—The GA committee meeting will be the end of March or the beginning of April and they need new committee members.

—There was discussion about the money that the GA committee gave to the EAA chapter for aviation events.

Les advised that Shawn Gab's hanger is for sale.

There is a fly-in at Glendo and a number of people confirm that it was a good fly-in to attend.

Meeting adjourned

## **Building the CP-750 “Beryl”, Part 4, Firewall Forward**

*By Scott Christainsen*

I was building on a budget so my first choice for an engine was a turbocharged 180hp Corvair Spider engine. But I had an income now and after several years of building airframe parts, I realized that I wanted a real aircraft engine. I was also changing my mind about being an aerobatic pilot, so the plan was to build an airplane for cross country flying, VFR and IFR, and building flight time for a career as a pilot.

After college graduation I flew to Colorado Springs for a job interview flying tow pilot for the glider program at the Air Force Academy (AFA). At first it was only part time but it was lots of flying experience. I moved the Beryl project to Colorado Springs two years later after changing to full time flying and working part time as a mechanic at the AFA cadet soaring program. The mechanic job became full time a year later after the temporary job ended. I had a good income now to continue building the airplane.

I bought a Lycoming IO-320 that was removed from a Piper Twin Comanche . When it arrived on a pallet, it looked pathetic. I overhauled the engine and installed parts that were missing. I worked at Univair while going to A&P school and the prop shop was able to build up a new prop from parts and new blades so that is how I ended up with a Hartzell constant speed propeller.

Mating the Lycoming engine to the fuselage was scary. I bought a steel parts kit to build a dynafocal engine mount. The four cups for the rubber mounts had to be welded first and then prebent tubes were cut and welded in place between the cups bolted to the engine case. The engine mounts on the firewall had vertical bolts so the engine could swing away to the side for maintenance access. This plan came from the Super Cub engines I was towing with. (In the end, this didn't work out because the engine/prop weight proved too much for a swing mount.) I placed the engine on a table in front of the fuselage making sure it was in the flying position, then cut steel tubing to attach the engine dynafocal to the firewall attach bolt fittings that were previously welded on the workbench. The tubes were tack welded at each corner of the firewall and at each point on the dynafocal assembly. After adding more tack welds for rigidity, I removed the engine and started the finish welding. I won't tell you that finish welding of the engine mount didn't cause some distortion and the engine mount fitted perfectly, because it didn't. But with the help from the torch and mussel persuasion, it got done.

The fiberglass cowling was a big job. I took the easy way out and hired an insulation contractor to spray expanding foam on the plastic covered engine. I used duct tape and lots of bed sheets to protect the aircraft from overspray. When finished, the aircraft looked like it had a weird growth on it. With a handsaw, surform tools, and sand paper, the cowl slowly became visible. Bondo was used to correct mistakes and to make a smooth surface for the waxy mold release paste. The cowl was done in two steps, one top and one bottom half. After the epoxy hardened I was worried about how the parts were going to come off the mold without damage. NO PROBELMO! I was surprised as I started to lift up an edge of the layup, the color under the fiberglass became frost-like

and the part separated from the mold without difficulty. I was a happy camper, the mold release agent did its job. I hated the thought that I now had to destroy the on-aircraft cowl mold. I took some photographs before getting on with it. Before destroying to mold I trimmed the top and bottom halves to meet at a straight edge where the piano hinge would be glassed in and provide an invisible connection between the top and bottom cowl. Very neat and easy to remove for engine access. The next couple of days (weeks) were used to finish the fiberglass for painting. The drop cloths did a good job keeping the rest of the aircraft protected.

I had no idea for how to finish the front of the cowl. The next trip to Oshkosh would provide several ideas. I started making the engine baffling to mate with the top cowl. I used ½ inch aluminum angle for all the corners and flat sheet trimmed to the engine profile. Clecos held all the pieces together until final riveting.

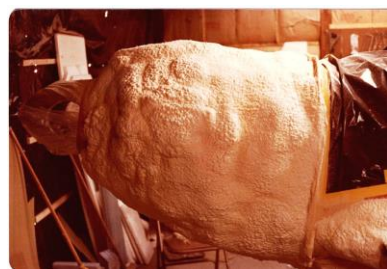
The next newsletter will describe the building of the landing gear, fuel tanks, and installing multiple systems.



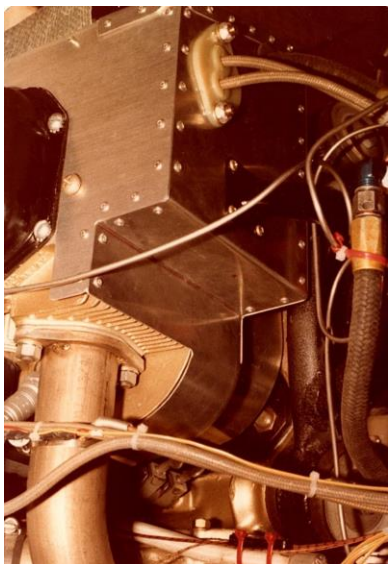
*fiberglass layup top half*



*engine pre-foam*



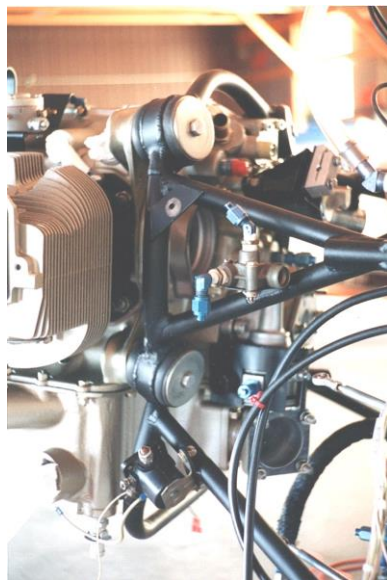
*foam cowl mold(1)*



*engine baffling*



*spraying foam*



*engine baffling*

# Members' Stories

## One December Day

*By Jim Hayward*

Saturday, December 11, 2004.... weather forecast - winds calm to 10 mph, temperature - mid to high 60's.... a great day to go flying!! Well, not quite yet. Daughter, son-in-law, and grand kids headed out yesterday afternoon for Scottsbluff, NE to visit some of their grand folks so we have their animal chores to do for the weekend. Six horses, a cat, a dwarf rabbit, and two dogs. The dogs stayed with us over the weekend but we went out to their place to take care of the others.

With the chores done by 10am, we're back home to finish some Christmas stuff. That done, wife Linda says, "You've helped a lot... go fly." She didn't have to repeat herself! I'd wanted to go see the guys over at the RC Aces flying field off of Deadwood Ave. for the past month or two. Just too many other things going on this summer. So I got my plane out, pre-flighted, warmed 'er up and departed about 10:45, heading for their radio control field. Arriving about 10minutes later, I found a half-dozen guys there.

My usual field landing spot was taken with someone flying their model so I checked out the main part of the field. I saw no one in any of the pilot flight pits, so I decided to go ahead and land on their nice paved runway. I did so and taxied off in short order... sure do love those new hydraulic brakes! I can now get into places I can't get out of so have to be really careful if I see some place I want to investigate up close! I parked behind one of the flight pits, shut down, and got out to several "Hey, where ya been so long?" greetings.

I spent an hour or so visiting then took off, heading over to daughter Lynette's place to check on their rabbit. He had caught his back feet on one of those sticky mouse traps when we were out doing chores earlier. We had let him out of his kennel to run around the house while we do the chores and he had really worn himself out trying to get away from it. We hadn't noticed that Lynette had put the sticky traps down. Linda was worried there was poison in them (there wasn't). He was okay so I departed there and headed back home. As I passed by Menard's near the interstate, I called Rapid Tower to get clearance into their airspace and to my strip. They cleared me in without any problem.

Not two minutes later, I heard Mr. Rotax drop down somewhat from the 5500 rpm he was turning. My tach now showed about 5000 rpm and slowly dropping. Hmm.... I eased the throttle forward thinking it had crept back or I'd inadvertently moved it... no good. I flipped on the aux fuel pump... no good. Thinking maybe I had carb ice, I checked my carb temp gauge.... 55.7°F, not a problem. The rpm kept on dropping slowly. I worked the throttle a bit thinking maybe something had happened to the linkage... no good.

I thought to myself, "Hmm.... this ain't looking too good for the home team." Now I had crossed Elk Vale road and was about 4 miles northwest of my home strip. The engine had dropped to about 4400 rpm by now. There's a vibration band around 4200 rpm I stay away from so I dropped the throttle on down to 4000 which is about a minimum rpm for me to maintain altitude solo. I figured I'd nurse the engine along and make it on hom

Four thousand rev's just wasn't gonna do for Mr. Rotax as he now was turning about 3800 and decreasing as was my altitude. Three miles from home and about 800 AGL I'm thinking, "Folks, this ain't a-gonna work too well!" I figured I'd better set 'er down while the settin' was good. I'm over some hills and draws a couple of miles northwest of our place so picked out a hilltop with some cows a bit south of it. As I cranked her into the wind and set up for landing, I noticed it would be iffy to make the top of the hill if I could make it at all.

I'd often thought about this very situation and thought that, should the occasion ever arise, I'd try dropping the nose to gain speed then try putting'er down in a climb attitude. Well, I'd never taken the time to try it and thought how this was a hell of a time to try it out. I was at 50 mph indicated and would have made the top had I not had a 10-12 mph headwind. The GPS showed a ground speed of around 40 mph and that hilltop just wasn't going to happen. So I pushed the nose over, picked up some speed and headed for the hillside. I wanted some speed in case the wind coming over the hill would try and push me down.

I kept 60 mph until well below the hilltop then pulled up into an easy climb. The speed started bleeding off quickly... 55... 50... 45. About 100' or so from the top I was down to 40mph (stall's at 37 indicated), finally touching down just below the hilltop and rolling out onto it nicely. I hit what I thought was a rock but it was actually a dried cow pucky. Not a real problem but presented a need to stay away from them if possible. The engine had quit sometime before I stopped rolling, I hadn't noticed that it had quit... must have had other things on my mind. :-)

At any rate, I shut off the ignition, turned off my master switch, and got out. I was only a couple of lousy miles from my strip.... bummer!! Walking around to the engine, I checked the throttle linkages (good), felt the carbs for cold (none), and checked for fuel in the lines (good). I was trying to figure out just what the heck was wrong when I noticed the cog drive belt to the prop reduction unit was quite noticeably loose. I checked the top of the drive for a loose adjusting nut not thinking that it would not have affected the engine rpm. That looked normal so I happened to just grab hold of the drive belt and flex it when I saw the whole damn PTO shaft move over an eighth inch!!! "Dang!" I thought, "This can't be good." I moved it some more... dunno if it was to confirm my dis-believing eyes or for the novelty of it. "Yep, looks like a done deal to me!"

I got out my cell phone and called home. Son Jeremie answered. He had come by to visit but Linda had taken her trike out for a spin since I had gone flying (each playing with our Big Girl/Big Boy toys). She had come back about 5 minutes before I called. I told her I was down with engine problems, but everything was okay and the plane and me were in one piece. I then described where I was. They found me about 25 minutes later as I was walking a quarter mile north of the plane trying to find a gate near a road that we could trailer it out.

They pulled up and Linda said, "C'mon... get in, we've got this all figured out!" Jeremie drove us over to Olson Auto over on Radar Hill Rd. and a good friend of his, where we borrowed the tilt-bed wrecker that he hauls cars with. We stopped at our house for some tie down straps and a tail support then back over to the plane. Jeremie parked the wrecker in front of the plane, tilted and extended the bed down, and pretty much just winched 'er up onto the truck bed. We tied it down and headed back out of the pasture with the cows wondering what was going on.

Linda had driven another vehicle over so once we got out of the pasture and on the road, she stayed ahead of us with the flashers on, waving folks off to the side of the road. The wrecker's high bed really worked well for us all the way home. I took a couple of pictures for Glen Olson which I gave to him upon returning his wrecker. I said, "Now you can add 'aircraft recovery' to your repertoire!" He just grinned and pinned the photos up on his bulletin board. He wouldn't take any payment for the use of his wrecker. I said, "Aww, c'mon... you need something." He said with a grin, "Nah... I may need a favor sometime." I said, "Deal!" We visited a bit then left so I could get the plane back in the hangar.

Arriving back home, I noticed the prop had stopped horizontally which was nice for getting it in the hangar. The engine seemed to be locked up since I could only get about 10° of crank rotation out of it. I'll get this one off, put my spare engine on, and tear the bad one down to see what I find. Right now it looks like the main bearings and probably a broken crank. I put a note up to the Challenger e-mail list about the problem I had. A Rotax mechanic up in Canada sent me a note saying he'd just rebuilt an engine with pretty much the exact same problem and symptoms that I described. The inner main bearing on that one had failed allowing the crankshaft to flex too much and break. The Rotax 503's crank is a two-piece, pressed-together crank.

So, I've got a winter rebuild project to do now after I get the spare engine on. Looks like about \$800 or so.... sure beats \$10,000 to \$20,000 for a certified engine rebuild! A friend of mine over in Salem, SD told me that he's never gotten more than 550 hours out of a crankshaft and that I shouldn't feel too bad about this one having 532 hours on it. Although Rotax recommends a 300 hour rebuild, quite a few guys have been posting they had 600 to near 900 hours on their engines without ever having them apart and that certainly 600 hours was quite do-able. I thought I could/would do the same. Besides, it's just so hard to tear down a good-running engine. :-)

My dad used to tell me, "Bought experience is the best kind because you don't forget." Well, I guess I'll take this one apart and see what's going on inside. :-)

---

*And here's one from Darrell Sauder:*

here's one from 50 years ago: There I was, in USAF pilot training flying the mighty Cessna T-37 jet trainer anxiously awaiting my transition into the T-38. I was in the left seat, my instructor in the right, on downwind for landing at Laughlin AFB, DelRio, Texas. It was a fine day to be flying.. only trouble was I couldn't get the airplane to fly fast enough.. couldn't reach the required airspeed of 135 knots. Speed brakes up-check, gear up-check, Throttles firewalled- check.???? Then I heard a remark that I will never forget..."Sauder.. Yes Sir... When we get on the ground I want you to go directly to the hospital! Sir? I want you to get a plexiglass stomach installed. You have got your head so far up your \_\_\_ \_\_\_ \_\_\_ that you can't see that you are misreading your airspeed indicator by a hundred knots!!!" OK... now someone else's turn to tell on themselves.