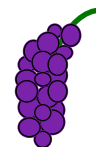


# THE GRAPEVINE



EAA CHAPTER 663 Livermore, California

Vol. XXIV, No. 7, July, 2004

There is a very fine line between "hobby" and "mental illness."

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## MEETING AND PROGRAM

Our July meeting will take place at 7:30 P.M. on the 1st of July in the Terminal Building at the Livermore Airport. The program will be a presentation on the Eggenfelder engine--as installed in a Glastar, which will be on display.

### MINUTES: GENERAL MEETING, EAA CHAPTER 663, JUNE 3, 2004, 7:35 PM KLVK TERMINAL BUILDING.

Chapter president Ralph Cloud called the meeting to order. Guest Roland Rapell (sp?) introduced himself.

The minutes of the May meetings were approved as printed in "The Grapevine".

Treasurer Sharon Constant reported a total of \$2626.17 in chapter funds. Her report was approved.

Business: The second chapter barbecue is coming on Saturday June 12<sup>th</sup> at 4 pm in and near hangar 113. Bring your own entree side dish and flying stories. Drinks and paper goods and plastic utensils will be there.

Bob Cowan set the Young Eagle rallies for June 6<sup>th</sup> and 26<sup>th</sup> and asked for volunteer pilots. Bob also asked for someone to take over as Young Eagle coordinator.

On the matter of fly-outs, Greg Triplett mentioned McMinnville, Oregon, home of the Evergreen Air Museum as a possible destination. Takers?

Bob Farnam's application for Fight Advisor will be send to the EAA. We still could use another Technical Advisor.

Announcements: Next Board of Directors meeting will be June 17 at Ralph's place. Next meeting July 1, next barbecue will be July 4<sup>th</sup>.

Member forum: Bob Buckthal related his latest aerial adventure coping with the in-flight failure of an ignition system. Some discussion follow about the matter of what to do next in such situations.

Break and then Program: Bill Jepson introduced Kirk Hammersmith from Direct To Avionics, dealers for Chelton Flight Systems. Kirk introduced us to the wonders of the glass cockpit. All it takes is bundles of money. He showed some of the incredible capabilities of these systems. Chapter member Scott Alair has a single screen system in his Lancair Legacy that was on the ramp for us to inspect.

Meeting adjourned for pie.

Respectfully submitted, Bruce Cruikshank  
Secretary.

## **BOARD OF DIRECTORS, 6-17-04 @ RALPH'S**

A quorum was achieved by including Darlene and Sparky, who was less than perky as a result of a minor operation--he was not able to contribute very much to the meeting.

### **BBQ on July 4th @ 4 P.M. at the Bobs' hangars**

Bob Farnam is now our second Flight Advisor!

Voted to buy a Chapter Banner, previously approved but not acquired.

The old chapter scale set is now for sale!

Adjourned for pie.

J. D. M.

### **SUBURU RV-9A DOWN**

by Ray Doerr

As for what happened, here is what I know: I flew from IDX (New Century) to FSK (Fort Scott) on a 80 degree day with no issues whatsoever. I landed at FSK (about 35 minute flight), and then taxied back to the runway. I sat there for around 2 minutes with the engine running while I dialed in my next leg on the GPS. I departed FSK at 110 - 120 mph with the VSI at 1,000 ft/min. Coolant temp on climb out was 218 with Oil 5-7 degrees hotter. Once I reached 3,000 MSL I backed the MT Prop off to 2100 (engine 3800) and started cruise flight to BUM (Butler,MO). A minute went by when the engine stumbled briefly, than a few seconds later, all engine power was loss. At this same time I noticed the Fuel Pressure was 5 - 7 PSI and the AUX pump kicked in, but that did not resolve the fuel pressure issue. I switched from the left tank (which had 12 gal remaining) to the right tank (full). I tried the pump switch in AUX, then Main and back again. I switched the Master to Bypass and still nothing. I Switched the MP Prop to Manual and fully feathered the prop for best glide of 80 mph and headed back to FSK. All of this was done in around 15 seconds. I had FSK in sight when I realized I didn't have enough altitude to make the field, now I was 1000 AGL I spotted a suitable landing area in a field. I landing in the field fine around 60-65 mph and rollout into a wheat field. The bad luck was a small ditch between the two fields which the nose wheel got stuck in, even though I had full back elevator. The rest was a complete nose over at around 30 - 40

mph. The last image in my mind was seeing the prop go into the ground and break, my thoughts were, this can't be good. The next image I had was hanging upside down and the smell of fuel. It took a few seconds to figure out what happened and then I release my belt and silenced the ELT so I could talk on 121.5. The only one to hear me was a overhead plane which relayed all my messages back to ATC. My next mission was to get out of the cockpit in which I was trapped. Thank God the top of the canopy broke, because I was unable to break the sides to crawl under. I had to start at the top of the canopy which was now against the ground and break off small pieces at a time until I had a hole big enough to crawl through. This is where I got the most cuts on my hands! Once outside I took my headset and was able to talk on 121.5 by pressing the PTT on the stick. I had shut off the fuel valve after the crash (Something I should have done earlier), but there was fuel still pouring out. I couldn't figure this out, but afterwards it made sense. The engine was against the ground upside down with the vertical stabilizer up much higher. This made the tanks higher than the vent lines which were spilling out all the remaining fuel. At this point the ambulance came and put me on a hard board with neck brace. I remained on this board for three hours until the cat scans came back of my head and neck. All was fine except for a really sore neck. All in all, I faired pretty well, except for the loss of a beautiful airplane.

Today Jan arrived at Kansas City airport where I picked him up and we went down to Paola (K81) where we looked at the plane. A salvage company removed the plane from the field near FSK to a hanger at K81. They had to remove the wings to transport the plane, and I warned them that the bottom row of wing bolts was fun. He commented, they were no fun at all. I guess he didn't realize I was kidding. After looking at the plane, the damage looked worse than I had thought. When the vertical stab. hit the ground it caused the tail cone section to compress right behind the baggage wall. Vertical stab and rudder were destroyed, the horizontal stab. and the elevators didn't get touched. The right wing tip hit something and the wing buckled between the last two tip ribs. The prop was demolished (all 3 blades snapped 8" from the hub), The prop flange was bent 1/2" off center. The nose gear leg was folded completely under the belly and took the

## GASOLINE DELIVERY SYSTEMS

bottom of the engine mount with it up into the bottom skin and firewall. The engine mount held together, but the firewall bracing gave in.

Now for finding the root cause: Jan and I removed the spinner and prop. Connected a fuel can to the left side of the fuselage (which was the side I was on) and a return line into another can. We turned on one pump at a time, but neither of them would prime. Jan then removed the line on the regulator and fuel sprayed out. The pumps can't prime with the output side under pressure. After Jan connected the line back to the regulator, both pumps primed just fine. Now we started the engine. It fired right up and lots of black smoke came out of the exhaust. The smoke cleared after a few minutes and Jan said this was because the engine was upside down for 24 hours. Oil level was still right where it should be, at the full mark. Jan removed the gascolator cup and there were pieces of debris in the bottom, but the screen was clear. We tried all the backup systems and they all worked perfectly.

All we came to conclude from this was that the pumps couldn't prime. Was it vapor lock? I can't say for sure because the plane was tested on hotter days with much harder climbs and they passed with flying colors. The plane performed great for the first leg of this trip which was 35 minutes long.

As for my configuration, The fuel line from the valve runs down the center console to the firewall 3" off the floor. On the firewall side is a aluminum tube (6" long) from the bulkhead fitting to the gascolator. The gascolator is positioned so the drain fitting just fits under the cowl and is connected to the bottom of the pumps with 8" rubber hose. There is no air box around the pumps or gascolator.

Nathan Larson who is located 15 minutes from me also has this setup and he has not had any issues. All of my fuel has been purchased at Gardner (K34) which is the same place Nathan Larson and Matt Burch purchase their mogas.

I still think the vapor lock issue is still not totally understood, but I agree with Jan that the bleed bypass would at least resolve the issue if and when it should occur. I just wish that he had the bleed kit ready and I had installed it, maybe then I wouldn't have to rebuild!

Ray Doerr's accident report is still more proof that even the "simplest" fuel system isn't necessarily simple or fool proof.

Lyle Powell, a true master builder from the Chapter 393, Concord, became an advocate for really well thought out fuel systems as the result of losing several friends in fuel starvation-related crashes. These friends were mostly, like Lyle, builders of one or another of the Glasair models.

A characteristic of the Glasairs was very tight cowling of the engine, to the extent that they were prone to overheating of components in the engine compartment--especially the engine-driven fuel pump which was bolted to the accessory case, not far from a lot of hot oil.

I think that most of the accidents, some of which Lyle witnessed from the warm-up area, occurred after flying into a gathering of homebuilts; sitting around for an hour or so heat-soaking in the hot sun and then starting up the engine and attempting to fly out without waiting for temperatures to stabilize. Engine failure with nowhere to escape was sometimes the result.

Motivated by these events, Lyle and others soon became convinced that the culprit probably was the inability of the hot engine-driven pump to SUCK fuel from the tank. Never one to try to reinvent the wheel, Lyle looked at what the big boys in the Wichita crowd was doing to prevent such occurrences and found the answer on fuel-injected engines which recirculated part of the fuel sent to the injector system back to the fuel tank. I suspect that this was done just because that was necessary with the injection systems of the time, but I don't really know that for sure.

Lyle realized that always having some cool fuel flowing through the pump *might* just be all that was necessary to cool the pump enough to preclude vapor lock. He immediately installed such a system on his own plane and began trying to convince all those who would listen that this was *the* way to go. For non-injected engines he found that he could bypass enough fuel by inserting a modified "T" in the line to the carburetor; the modification involved putting a plug in the "T" and drilling the plug with a #60 drill. A simple line back to the tank completed the system. So far as I know, no one with this mod. had troubles with vapor lock.

I remember that in the good old days, it was not uncommon to see cars pulled over to the

side of the road with the hood up and the driver either waiting for help or pouring cold water on his hot fuel pump, located on the block, just behind the radiator. Usually such scenes were precipitated by driving up hills in heavy traffic with the A/C on. Electric fuel pumps in the gas tank seem to have eliminated this problem for cars and might not be a bad idea for airplanes. Talk to the builder support folks at your kit vendor.

**NTSB Identification: LAXO4LA166**  
**14 CFR Part 91: General Aviation**

Accident occurred Thursday, March 18, 2004 in  
Placerville, CA

Aircraft: Globe GC-1B, registration: N369BZ

Injuries: 1 Serious.

This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed.

On March 18, 2004, about 1430 Pacific standard time, a Globe GC-1B, N369BZ, made a forced landing following a loss of engine power on takeoff from Placerville Airport (PVF), Placerville, California. The owner/pilot was operating the airplane under the provisions of 14 CFR Part 91. The airline transport pilot, the sole occupant, sustained serious injuries; the airplane sustained substantial damage. The personal cross-country flight was en route to Cameron Airpark, Cameron Park, California. Visual meteorological conditions prevailed; no flight plan had been filed. The primary wreckage was at 38 degrees 43.266 minutes north latitude and 120 degrees 45.509 minutes west longitude.

The pilot reported that he had just dropped off a passenger, and was repositioning the airplane to O61. On the initial climb out, at 200 to 300 feet agl, the engine quit. He attempted to turn back to the runway, but did not have enough altitude. He elected to stall the airplane into the trees on the south slope of the airport boundary.

Airport personnel witnessed the accident. The first responders to the accident site turned off the fuel selector switch. They assisted the pilot out of the airplane, and transported him to the hospital.

The witnesses reported that the pilot was

departing using runway 23. The airplane took off and did a steep, almost vertical ascent, and (then) banked hard to the left (south). The pilot appeared to stall the airplane as it went into the trees on the south side of the runway.

The pilot had refueled the airplane at Cameron Airpark with a total of 28 gallons. He had flown to Livermore Airport, Livermore, CA, (then) to PVF, and was departing PVF when the loss of power occurred. The plane was recovered for further investigation.

The cause of the accident has not been officially determined, but is not inconsistent with the fuel delivery problems discussed above--O.K., O.K., that's why I included it here. So I'm not too subtle! I enjoy beating dead horses!

### IN MEMORIAM

It is with regret that we inform you of the passing of Clay "Tex" Haley on June 4, 2004. As the Night Watchman of LVK for 17 years, Tex was a friend to many of the LVK tenants and employees. He will be missed.

A **Memorial Service** to say good-bye to Tex will be held on **Saturday, July 17, 2004 at 10:30 a.m.** in the **LVK Terminal Building**. Part of the service will include fly-by "Missing Man" formations. Anyone interested in participating in these formations need to contact Ralph Huy at 925/998-2961 no later than Saturday, July 10th.

At the Service, a donation basket will also be available to purchase a tree to be planted at the airport along with a plaque in memory of Tex.

### AMELIA REID, A CLASS ACT

Amelia Reid Aviation, using Citabrias and Champs, is now run by her son Robin and his wife Marici at Reid-Hillview airport.

...my favorite Amelia story (there are many) is when she was flying an instrument approach to SJC in a C-172 and was about 12 out. At the time PSA flew 727s with a huge smile painted on the nose. Amelia was making about 80 knots and the 727 was on approach behind her at about 17 miles and was about to fall out of the sky trying to follow Amelia. PSA asked Bay Approach if the Cessna could pick up her speed a bit, and Amelia

replied "Its my approach and I fly it at any speed I want." There was a moment of silence and a voice from the clouds said, "Honey, did you ever see one of these things open its mouth?"

### **BURT DOES IT AGAIN!**

Witnessed by Tim LoDolce

A group of NorCal EZ flyers flew down June 20th the day before the launch. Some even arrived two days early just to "scope" out the place and get the inside track on what to expect. We knew that MHV (Mojave) airport had a 7 mile TFR around it so my EZ Flight of 3 EZ's landed at Lancaster's Gen. Wm. J. Fox Field instead. By the way, the top of the TFR airspace did turn out to be FL200...meaning exactly that...20,000 feet. I'm sure the thinking was that a high cap on the TFR would discourage the aerial gawkers and it worked. Later we found we could have used Rosamond airport which also had a car rental available and it is 12 miles closer than WJF (Wm. J. Fox).

We drove up to Mojave to check into the motel and then around the airport to get a bite to eat at the "Voyager Cafe". There's lots of Rutan memorabilia in the place. There's even a Long Ez sandwich on the menu! The airport's south eastern corner was selected as the general viewing area and parking would be and was adequate. I did find the emptiness of this place very odd. There was hardly a motor home on the field and no one in town. I said to myself more than once that maybe they had over anticipated the crowd numbers and after all it is a normal work day and in the middle of the Mojave Desert.

Later we took a short drive down to Rosamond's Golden Cantina arriving around 5:30 PM. The Cantina is located on south side and east end of the Rosamond airports runway 25. They even have their own aircraft parking area in front of patio seating which is where we were quickly placed. Soon the Canard people from all over starting arriving. It was nice to see some of my old bud's again and just as nice to finally put a face to some I hadn't met before. By the end of the evening I'd guess at least 25 to 30 EZ people had come and gone.

As the clock turned past 3:00 AM I awoke and noticed the night desert winds were still blowing.

Later I learned the native Indian word for wind here in the high desert is "Mojave". I took a peek outside the window and was startled to see a line of cars passing the in front of the motel. All bumper to bumper gently moving along at a good but slow pace. It was apparent now that "if you build it, they will come"....remember the scene out of the movie Field of Dreams....exactly that. We quickly hustled up and headed out the door and jumped in the line.

The night air was cool but not too cool. Light jacket weather foretelling the heat that was yet to come later in the day's high sun. The line of cars at this point had to miles and miles long. The organizers kept the flow moving and we quickly found ourselves parked and heading for our soon to be personal viewing area at the end of Runway 30. It appears the MHV airport has built a new taxi way just for this and future Space Port viewing activities. I checked my AirChart airport diagram of MHV and the newly constructed taxi way is not yet there.

Quickly the sun rose and right on schedule (6:35 AM) White Knight carrying Space Ship One under it's belly, taxied by the crowd with Mike Melville waving his arm out the one of the little starboard side windows. The chase planes were quickly launched consisting of what looked like an aerobatic Extra or Edge and a Beech Starship. There was already a jet trainer Buckeye flying overhead which must of come from somewhere else.

A few minutes later and White Knight with Space Ship One firmly attached roared down runway 30, lifted off and started a series of gentle right and left turns over the top of the airport closely followed by the Starship. As the moment drew near for the drop, the aircraft were positioned directly below the fast rising sun which made picture taking and viewing nearly impossible. Many people had the air to air freq tuned in (123.375) and were listening intently. Soon the word came that the Space Ship had been released followed by "engine ignite".

At that moment we all saw the smoke quickly rising below, then straight though the middle and out the top of the brightly glowing sun. Up, up and away it rose faster and faster until 80 seconds passed and the engine was spent. What seemed a

long time later we heard a couple of high and very distant sonic booms and the crowd roared. We hear over the radio Mike activating the "feather" and then retracting it once back in the earth's atmosphere.

It was at that point we could see the now for-real "space ship" returning to earth. It was quickly joined by the Starship and the jet trainer high over the airport. At one point I heard Mike say over the radio that it was great to see the jets along side and he could even hear their engines as

he was now officially a glider.

Soon he called "High Key and 103 knots" and turned to line back up on MHV's runway 30 being led by the little aerobatic plane down to the runway. Mike make a beautiful landing where it was gently towed into the press viewing arena. The rest as you know is history and we were all happy to have played a very small part in just being there. Mike Melville can now carry the distinction of being the "first civilian astronaut pilot".

## **CHAPTER BBQ ON THE 4TH OF JULY**

The Bobs'hangars at 4 P.M.

Bring an entree, salad or dessert, dealer's choice, and of course, whatever **you** plan on cooking/eating

### **BBQ TIME**

see above



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