



Chapter 569

Communicator

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JULY
1999

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Meeting Announcement



DATE: Tuesday, July 6, 1999

TIME: We will start the grill at 6:30 pm, but get there as soon as you can for hangar talk and some flying fun. The Club will bring the meat and drink.

COST: \$2.00 Per person

BRING: Your family
Covered dish
Plates and silverware
Appetite
Hangar talk

PLACE: Crete Airport, FBO hangar

PROGRAM: There may be a short business meeting but nothing else is planned. We will try to finish up about 8:00 so people flying in can get home before dark.

JUNE MINUTES

Chapter #569 meeting was held June 1st at Hill Aero. Doug Hill created problems on his plane and everyone had to go around and preflight the plane. Everyone had a good time. We didn't have a business meeting this time. Jim Jeffers reported on flying events coming up. There were 29 members and one guest present. Dean Fletcher joined our club this evening. Welcome Dean

Norm Sell, Secretary

PRESIDENT'S MESSAGE

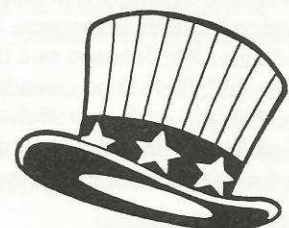
I had a great time at the airport the other day. It is one of my favorite places to avoid the hassles of everyday life. I had flown in and taxied directly to the hangar. Several people were working on various projects. When I helped myself to the hose on the side of the hangar, one of the kids asked if she and her brother could help me wash the airplane. They were bored with watching their Dad and two other men trying to fit the main gear on a homebuilt. It was obvious the kids needed some hands-on activity. I was happy for the help, and the kids did a great job washing the airplane. They knew how to be safe and were very careful. When we were done, I asked their Dad if I could offer the kids a flight. Shelly and her brother were good fliers. They recognized landmarks, looked for traffic, and knew a good deal about flying airplanes. When we returned to the airport, it was nearly time for dinner and the kids headed home. In about an hour, it would be time for the Chapter meeting in the back of the hangar.

Was it a dream? Yes, but dreams can become reality. All we have to do is set a goal, create a plan, and work to achieve the goal. Homebuilders know about dreams and working to achieve goals. Their completed aircraft are proof that dreams can become reality.

Over the past few years, our Chapter has talked about having it's own hangar. Do we want to make that dream become reality for Chapter 569? If so, I'm sure we can make it happen. Let's share some thoughts about whether or not we want a hangar and if so, *what* we expect from it. We'll worry about *where* it should be located and *how* to acquire it later.

See you at the airport,

Russ Kelsea



FOLLOW UP-RECAP OF RULES AND REGS OF AIRPLANE BUILDING

Controversy; it doesn't take long to surface when you talk about regulatory compliance. About the first time I talked to a Chapter member since my "Recap" was printed in the 569 newsletter a discussion ensued. Most of the conversation is about two statements:

"...once a certified appliance is placed on a home built it becomes an experimental appliance and no longer conforms to its' type design"

"An AD Note cannot apply to any part of an amateur built aircraft unless the specific aircraft is cited along with who should do the work and to what standard."

It seems that there is a good amount of controversy about home built certification in general, and these issues in particular. Just remember, I prefaced my comments by stating that I had FAA review my "Recap" article, and the basis for my "Recap" was taken from the "FAAviation News" which quotes the FAR by chapter and verse. I didn't write the regulations and I am not trying to interpret or defend them. All I am trying to do is standardize an interpretation for common value.

I feel that the regulatory misunderstanding controversy is perpetuated by the fact that no two people interpret the FARs the same way. This includes FAA inspectors and EAA builders, alike. What happens is that the regulatory compliance process is rarely the same under similar circumstances. When a certification discussion starts with FAA and an agreement on interpretation is reached, the rule should always be the same. But it is not. It is not uncommon to consult FAA offices in different regions with different interpretations for the same regulations, and sometimes different interpretations result from different inspectors in the same office. To make matters worse we home builders would rather kick around rumors of interpretation between ourselves rather than go to FAA for direction, so compliance issues really get distorted by hangar talk.

Suffice it to say that if the FAA inspector you are assigned to mandates a compliance process, his word is law unless you can convince him that your differing interpretation is correct by citing factual documentation; like the appropriate FAR (listed in the FAAviation News article), and the FAAviation News article itself for support.

I mentioned my consultation with FAA in preparation for the "Recap" article. Rick Johnson of FAA, whom I consulted with, offered these three additional comments.

(1) The FAAviation News article has one error. It states that Phase 1 operating limitations, generally issued with the FAA airworthiness inspection, have a 1-year compliance time frame. Mr. Johnson said this statement is wrong. In fact, he said, there is no calendar time limit for flying off the Phase 1 flight test hours. He went on to say that the Lincoln FAA office requires 40 hours of flight testing if the amateur built aircraft does not have a type certified engine and

propeller; and 25 test hours if both the engine and propeller are type certified.

(2) The "condition inspection" required of amateur built aircraft every 12 months should not be referred to as an "annual" inspection, as I did in the article.

(3) Mr. Johnson confirmed that strictly by the regulation, AD Note compliance does not apply to any part on an amateur built aircraft, unless specified as in the article; but he added, a jury would not look favorably on noncompliance and you would be at the mercy of the court, if you did not comply with a directive issued to correct a known problem affecting safety of flight.

It all adds up to common sense and good judgement.

Chapter 569- Technical Counselor - Doug Hill

SUMMARY OF FEDERAL AVIATION REGS FOR AMATEUR-BUILT AIRCRAFT

(taken from: FAAviation News, Volume 38-Number 4, May/June 1999)

FAR 21.191 - Basic definition of amateur built.
21.175 - Classification of airworthiness.
21.193 - Needed information for experimental licensing.
45.22 - "N" number rules.
45.23 - "Experimental" display.
45.25 - Location of "N" number.
45.29 - Size of "N" number.
47.15 - General information "N" number
47.33 - General information "N" number
91.205 - Instrument and equipment requirements.

Advisory Circular 20-27D - Initial building.

Advisory Circular 10-139 - Initial building.

FAR 91.305 - Flight testing area.

91.319 - Operating limitations

Advisory Circular 90-89A - Flight Test Handbook.

FAR 21.181 - Duration of airworthiness.

91.25 - Accident reporting.

91.207 - ELT requirements.

91.319 - Operating limitations.

21.93 - Major and minor alterations.

Advisory Circular 65-23A - Certification of Repairmen.

FAR 21.179 - Transfer of airworthiness.

YOUNG EAGLE REPORT

"We like our Young Eagles to be able to see out the window" That was the "no go" explanation I gave Karen Schurr, who was in charge of the kids for June 26.

Rain date (IMC date?) for our Capitol Aviation YE Rally is July 17. Can you help on the ground or in the air? Same

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pattern as May 15: 8:30 Pilot's mtg, and the kids are staged in, some at 9, some at 10, the rest at 11. Contact me at (402) 488-9238. (Obviously, not everyone who was in on this the first time will be free to be there on the different date.)

A YE Rally is cooking for July 25 at Crete. This is in coordination with Crete's annual celebration [Blue Water Festival? Of course I'm doing this "under the desk" at office, and my stuff is at home... More details on this are welcome!] Our chapter point man for this is Norm Sell. All I know for certain is Norm wanted 70 YE forms...

In our books we read of "inadvertent flight into Instrument Meteorological Conditions." In our books we see it is an Emergency. Our June 26 YE Rally was a case of Inadvertent Planning into Instrument Meteorological Conditions. Inadvertent Planning into IMC is pretty calm, a time to sip coffee, eat doughnuts, and wait and see... At the 8:30 Go/No go meeting, Russ and the pilots decided to wait around for an hour on the chance the ceiling might lift. No go decisions take longer.

That's the story of our YE Flight Rally hosted by Capitol Aviation Saturday the 26th. Russ had lined us up with the Tower to fly the extended pattern we liked, or, if we had to be closer in, to fly the figure eight pattern left pattern then right pattern that Tom Trumble invented on the spot back in May.

Karen Schurr brought in two boxes of doughnuts; Capitol chipped in a tub of iced pop, and Rick Cooper, Phil Jossi, Chuck Oden, Wally Peterson, Don Shoemaker, and Bill Splinter were there ready to fly; Russ Kelsea, Yvonne Shoemaker, Al Spaulding and Tom Winter were there ready to help on the ground.

GET THAT ZERO OFF YOUR TAIL

A final YE note: I have received a roster from EAA listing our members, their EAA numbers, and their YE Pilot numbers and their number of YE's flown. In the Young Eagles Flown column, there is a Zero after my name. I can deal with that; I'm not a pilot yet.

I hope to be a regular pilot just like you guys, and then help introduce Young Eagles to aviation, and to get that Zero off my tail.

TOM'S FLIGHT

My CFI was all booked for Monday, and I needed a tune-up or shake-down cruise for the Tour de Nebraska, and there are lots of old airplanes at Weeping Water, so out the door to the bicycle to the University office, I pulled a Wrong-way Corrigan and hit the MoPac East Trail instead.

The time was 9:30. Didn't know if I'd make it all the way to Weeping Water, and didn't care. I'd see where I was by noon.

It was a wonderful morning to hear the continuous scrunch of skinny roadbike tires on crushed limestone, watch

the wood thrushes flit from ground to bush, and see birds I couldn't even recognize. I've four road bikes, and have been grooming all of them for the trip, and will pick one. Today's bike was the big Schwinn Tourer. Biggest frame of any bike I've ever found in a thrift shop. Smooth creamy crankset, freshly trued wheels, newly greased wheel-bearings, good tightly adjusted derailleurs, foam rubber padding strapped down to the handlebar ends with handlebar tape. Ready to roll.

Morning miles go easy, when you're spending a day on a bike. Power bar at Walton? Why not. Because on a Monday morning, the Walton Trail Co. is closed, that's why. Oh well. Big water bottle nestled on the frame. Eagle, about 10 miles out, comes on quickly. Used to race some of my students out there and back. Found a Port-a-potty and got rid of some coffee. Life is good. Back to trail out of Eagle.

Elmwood. Not a cloud in the sky. I'm going to burn or scald if this sunscreen doesn't work. Trail end. Circled back into Elmwood, passing the home of Bess Streeter Aldrich, went to the grocery store and asked the best way to Weeping Water. On a bike? County roads Ok? County roads are fine. Ok, go north on this highway two miles til you see a windmill and a sign to Grampa's woods. Gravel road. Takes you right into Weeping Water. Watch out on the hills, the farmers are out!

Hills are your friends on a bike tour. They break the monotony. Listen for cars approaching from behind. Look back to make sure they are shifting around left. Up ahead, hey, that's a windsock! Is there an airport? No, but there is a sign for Grampa's Woods. The guy meant "windsock" when he said "windmill." Ok. Got the gravel road. "Fletcher Avenue." Good thing hills are your friends on a bike tour, cause this is a roller-coaster!

Pick a line when you're on the hilltop, 'cause flying downhill on gravel, you don't really want to steer over gravel to get to a smoother line. Got into top gear for the downhills so the pedals would still have bite, motored up to extend the coasting, and downshifted to bottom gear to clear the next hilltop. Sometimes uphill it was necessary to shift way back in the saddle to get more torque to the pedals. (Leg has most force when nearly straight. By actual experimentation.) Eventually just left it in bottom gear and when bottom gear again had bite, worked up the next hilltop. Thrills going down. Hit the brakes? No way!

Until right before the quarries. The last hill before the quarries of Weeping Water has a left turn at the foot. Exciting. Made the turn, and then a washout comes into view. BRAKES. Like skating, or steering on a bed of marbles. Stayed vertical, and eased over the washout. Bumps of washout eject the waterbottle. Realized it a bit later and came back for it.

Stopped at the quarries to ask directions to Brown's airport, and to top off the water bottle with Squirt. Weeping Water is a wonderfully picturesque town. Hills everywhere.

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Old little brick buildings. Time check. Noon. Great. Lunched at Judy's Country Cafe. Crowded. Food blah, but the coffee was good.

Refreshed, I headed east for the day's destination, Brown's Airport, operated by Jan and Barry Daniels. Their business card says "We like old airplanes." I like old airplanes. I expected we'd hit it off. We had run into each other at a couple of EAA doings.

Their airport is on a hilltop. First you see a windsock, and a Beechcraft Bonanza (the plane with the V-tail) with lots of grass around it. I rode up the drive, dismounted and looked around. Heard a woman's voice.

Hello? Come in.

Through a shop, and following the voices, into a pine-paneled livingroom. And there were Barry and Jan. You pedaled here, she asked. She offered me water or pop. We chatted for a while. I reported progress: 26 hours with my flying lessons, and I have participated in 103 landings. The first ones were better than the recent ones, which means my CFI is letting me land the plane to the extent reasonable.

"Give him the chicken-coop test," Jan said. Barry gave me the chicken-coop test. Suppose you're on a cross-country and do not trust the compass, what do you need to know? Every chicken coop faces south. Your CFI will never tell you that, and it's not in the books.

After a bit, Barry observed you've pedaled back to the fifties, you know. Time warp? I ask. Time warp. With that, he started the tour. In the next room, a welded steel Taylorcraft fuselage had just been recovered. Inside, very solid-looking. Outside, neat as a freshly-ironed white shirt. On to the next room. A Mooney with the cowling off and two cylinders removed. He invited me to look inside. Behind the engine was a cylinder with a sticker on it showing a vise with a line through it. Barry explained this was the vacuum pump for running the vacuum-operated gauges. The sticker is dual purpose: it tells you don't clamp the pump, and also its white background is heat sensitive. If the sticker is darkened or even flaking loose, the pump is going to fail.

Next, their Ercoupe, disassembled for "a twenty-year checkout." My old modeler's heart went kazong. There in front, the engine was plainly double angled: a downthrust angle and a rightthrust angle. I exclaimed that I build-in down and right thrust into every free-flight model I make, and that Fred Weick must have been a modeler.

Yup. The right thrust counters P-factor. With the downthrust, the plane will not stall. It will not spin, Barry replied. About the designer, Barry added, we call him "Mr. Fred." He's gone now. He also {I think I remember this right—TW} designed the Commanche for Piper.

He pointed to the horn-looking thing mounted on a stand-off on the right side of the plane. Venturi tube. It draws a vacuum where it widens, and the vacuum feeds the vacuum-operated instruments. So that's what those things are on the old airplanes!

No need for a pump, no need for expensive pump-backups. Idle thought: couldn't designers find a low air-pressure spot — e.g. just behind the cowling — and draw a vacuum source from there? Hmmm.

More tour: The V-tail Bonanza. Barry: That plane could have been saved as late as five years ago. Now I doubt that \$40,000 would make it airworthy. Magnesium parts are turning to powder. Owner has been besieged with people wanting to buy it. Called me to complain I was telling people about it. I don't tell 'em. But nowadays, the N-number and a computer will get you the name and address and phone of the owner over the internet.

Cessna 170B. "To make the 172, they just got rid of the rounded tail, and put on tri-gear." 1934 Fairchild with Warner Scarab radial engine. Opened the door of the old Fairchild. Smelled like my brother's Model A Ford. Barry: Know what this plane does? This plane closes airports. It was the last plane out of the last two airports it was hangared in, airports that don't exist anymore. Hope that's not an omen.

1946 Ercoupe, with original windshield. Kazong all over again. I memorized the N-number. Checked on internet. Now I know who owns it...)

Piper Super Cruiser(?) Great old plane. Haul anything that you can get in the door, Barry sez.

All over America, there are hangars like these, with planes not being flown. One example had 1500 hours on it. Total. 50 years old. How many hours are there in 50 years? (438,300. I did the math, back home. Something like 99.997 percent of the time, it sits rather than flies.) Will they come up for sale anytime soon? I ask. Can't say, he sez.

We stood in the hangar shade overlooking the hilltop of the short runway (1200 ft. The main runway is 2200) and chatted some more. I explained that I hoped to get my license sooner rather than (much) later, and then would probably buy or build my own plane, or maybe both. He told me of earlier people building Evans Volkspanes, in a race to see how cheap they could get them done. Nowadays, folks typically write checks for expensive kits, and then they don't build the kits, either, but just write more checks.

He had in mind to build about three: Leon Davis' DA-2A, and the Pietenpol Aircamper. Didn't get the third one.

I was expected home for supper, and it was getting time to get back on the bike. I thanked them for the hospitality and for the tour, expressed the hope that next time I'd land there instead of pedal there, and rode back to Lincoln.

Noticed my knees were red because I put no sunscreen on the legs at all. Painted them white with sunscreen, in case locking barn after the horses were stolen would make me feel any better. Also did a better job on the forearms.

At one hilltop I picked my line and coursed down it. Car behind. (Your ears are for seeing the cars behind you). Peaked back. Pick-up. Honk! He wants my line, and he's not slowing down or going around. I scootch way back, get my

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torso way low on the saddle and concentrate on steering while I traverse the loose gravel to get into a line to the right. Vroom. There he goes. As much dust as behind one of the quarry trucks. Squint. Focus on line ahead. Stay vertical.

More roller-coaster. Some calm. By golly, a chicken coop! I believe its open side faces south!

Diesel racket behind. Look back. Huge sprayer on four tractor tires, with sprayer outriggers folded back alongside the body like the wings of a Mantis. Looked back again. No sign that he was veering around. Looked back a third time. He has not seen me or is pretending I'm not there. Bunny-quick, I flit over to the left lane — at right, the ditch was not an option — and watched him go by on my right, in the right lane, still giving no indication he ever saw I was there. Rest of trip was shorn of excitement.

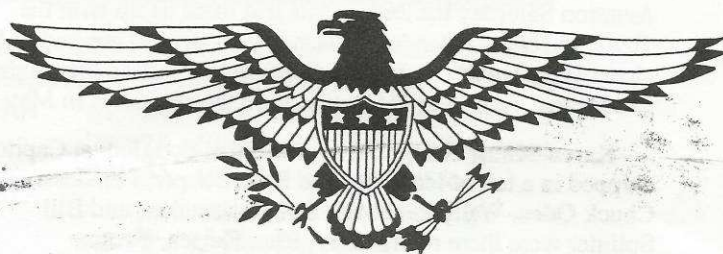
Past Eagle, the trail was fenced and barricaded off. "Trail Closed." It hadn't been that same morning. I got off the bike and stared at it for a while.

Nothing for it but to go up to O Street the rest of the way in. Phooey. More watching behind for vehicles, but there's a good shoulder, and all of the car and semi drivers seemed more concerned than the pick-up driver and more alert than the sprayer driver. Trails sure are better!

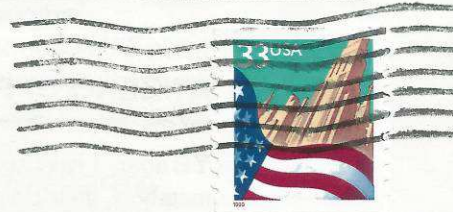
Five and one-half hours on a bicycle, one and one half hours at an airport. Worth it? Worth it.

CALENDAR

Jul 3-4	Midwest Aerobatic Championships Seward.
Jul 11	O'Neil Fly-in
Jul 11	Tekamah Fly-in, 7:00-11:00
Jul 25	Fly-in Breakfast/Blue River Festival, Crete
Jul 25	Camdon, SD Fly-inc 7:00-11:00
Jul 28-Aug 3	EAA AirVenture, Oshkosh
Aug 8	Hartington Fly-in, 7:00-12:00
Aug 14	Hastings EAA Fly-in
Aug 15	Red Cloud Fly-in, 7:00-10:00
Aug 21	Aviation Game Day, Crete
Aug 27-29	AAA, Minden
Aug 29	Norfolk Fly-in, 8:00-11:00
Aug 29	APA(AircraftPreservAssn) Greenfield,IA



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