

The Cleco

Experimental Aircraft Association • Chapter 393 • Concord, CA

Mail to: EAA Chapter 393 P.O. Box 272725 Concord, CA 94527-2725

APRIL 1992

YOUR 1992 SPIRITUAL LEADERS

PRESIDENT	Glenn Werner	676-8786
VICE PRESIDENT	Jim Lewis	283-7047
SEC/TREASURER	Callie Joyner	671-4871
NEWSLETTER EDITOR	Will Price	254-2267

NEW ADDRESS

Note the new address at the top of the newsletter. We have changed to a P.O. box at the main Concord Post Office. So if you need to mail anything use the one above. That's it. No other changes. We're the same organization and, best of all, the same great chapter officers.



CHAPTER MEETING

April 22, 1992 The 4th Wednesday of every month @ 7:30pm; Old Buchanan Terminal Building, Concord Airport. Thanks to Callie, we now have chairs in the meeting room. But it might be wise to bring yours until we are certain there are enough. *Wear your \$& @ % Badges please!*

And come to the meeting!!! Come on now, TV is rotten; drag yourself out and get to the meeting. If I can spend my time turning out this garbage, the least you can do is come to the meeting and tell me how terrible it is.

PROGRAM

As we promised you last month, our guest speaker this time will be Bryan Seeley talking about his customized '66 Mooney. From what I hear, any modification to a Mooney that you can think of, Brian has done. He has made major mods to the cowling and intake, to the exhaust system, to the propeller, to all fairings, and so on. Pete Wiebens tells me they were flying at 4,000 feet, 2,500 RPM, and 21 inches manifold pressure and were indicating 170 mph.

Furthermore, he was the driving force behind the Cafe 400 (originally the Cafe 250). Should be an intriguing evening.

MINUTES OF MEETING--MARCH 25

The meeting was called to order by President Glenn Werner.

Several members expressed concern that Chapter 393 (that's us) is not in the national EAA register. **Why not????** It appears that perhaps some required dues were not paid (individual members are not the only ones to screw up on their dues). The board will investigate this distressing perplexity and will expeditiously embark upon appropriate action to rectify this alarming adumbration.

Glenn presented the Board's opinion that the "missing-badge fine" approved by the membership at the February meeting be rescinded. This, because of its divisive nature judging from the emotional debate at that meeting. It was MSC that no fine be imposed but that members be conscientious about wearing their badges. One member requested that we have stick-on name tags that can be used by visitors and members who have not yet received their badges.

At the Board's suggestion, it was MSC that the hydraulic scales be donated to an appropriate educational institution.

The proposal regarding dues published in the March Cleco was MSC. That is, dues are due (how about "membership fee is due") on March 1; everyone is prorated through February 28, 1993. Furthermore, anyone whose payment is not received by date of mailing of the April Cleco will be deleted from the mailing list; that is:



Pay up or else!

So if you don't have a Cleco to read (which must mean you're not reading this) then get your dues paid--see the March Cleco for your amount. Remember, only the elite of our society--members of 393--have unrestricted access to the ecstasy of this glorious publication.

The availability of our meeting room continues to be in question. For now, we are where we are (whatever that means). If there is ever a sudden change, you will read it in the Cleco.

The raffle produced another winner (trumpets, please). John Diegoli was the winner of...wait a minute...we forgot the raffle prize. Well, tough luck John--your big chance, too. The Board should have a real blast at the next Board meeting. Oh, oh--Callie just told me we will have your prize at the next meeting.

Introductions produced some more interesting gossip. Larry Laughlin is going to Hawaii for his vacation. Hey Larry, you didn't say you were taking Vicky; what's going on???

Lyle Powell says he is making great progress on his Glasair III and has moved the completion up from Friday to Thursday.

Jerry Greth has the Cirrus back in the hangar repositioning the horizontal stabilizer. He feels this is necessary before opening it up for the mach 1 tests.

Some *good* news from Quentin Durham: he has conquered his allergy problem. Apparently it was a mechanical irritation from the fiberglass itself. Glad to hear it Quentin--would hate to see you working in a space suit, or worse yet, selling your project.

My Lancair is flying well; I am flying poorly; the engine monitoring computer is treating me *very* poorly. Ahhh, the joy of breaking new ground. (Ugh--the sound you heard was me bashing my head against the hangar wall; the next sound you hear will be the definitive echo of a sledge hammer on fiberglass.)

The speaker for the evening was Roy Howell, a chemist from Red Line Oil. I think that everyone shared my appreciation of a terrific presentation.

MINUTES OF BOARD MEETING 4/8/92

The meeting was called to order by President Glenn Werner.

Callie reported that she is in the process of rectifying the deplorable situation of our being omitted from the National chapter directory and will return our status to active with concomitant national rank and privilege--this through her exceptional ability to get to the heart of a perplexing set of circumstances and, without unctuousity, proceed with the necessary action. (She paid the bill.)

Per the March meeting request from the membership regarding name badges, Glenn will obtain some stick-on name badges for visitors, those who have not yet received their badge, and forgetful souls.

HOLD UP!!! We had best refrain from rushing into donating the hydraulic scales. We have had an inquiry (serious sounding) from someone in San Jose. Glenn has put Pete in contact with the individual.

The Board will ensure that two raffle prizes are available at the next meeting: one for last month's winner and the other for the coming meeting. Then let's get back into sync. Remember: If you win the raffle, you should bring the prize for the next month's raffle.

We still have been unable to establish contact with CRAMP. We are beginning to wonder what the hell has happened. Have they dried up and blown away (with our \$1,000)???. The Board will get a letter out to them immediately. We are obviously very anxious to have our voice heard and our concerns addressed (as suggested by the previous CRAMP president when he spoke to us several months ago).

Please note that we have a new P.O. box number. The previous one was over at Rossmoor and was a pain in the you-know-where to get to. So by Board action we have switched to the main Concord post office (near Buchanan).

Callie requested that we get some decent looking letterhead for correspondence. The stuff we have now comes out of the National office and is generic in that there is a fill-in spot for the chapter number. It looks pretty Mickey-Mouse. I (meaning WP) will assume the burdensome responsibility of rectifying this dreadful predicament.

Treasurer's report has been missing from meetings. Glenn, don't forget to give Callie her moment.

NEW MEMBERS

If you can believe it, we have actually been able to con some poor, unsuspecting souls into joining our group.

Phil Jenkins and **Bob Decker** are old hands around Buchanan. They already have a Glasair flying (it is hangered in the Port-A-Port) and are building a second. (I am really surprised that they did not decide to move up to something a little more modern.) Both are retired airline pilots and are genuine pains in the back end. I get nothing but flack and ridicule from them about my Lancair. If you want to stop by and pester them, their "building hangar" is in the northwest corner of the Port-A-Port (I don't know the number).

Robert Cosgrove is another old hand to join us. He currently has a Challenger II and has owned two other general aviation aircraft. Perhaps he can give us some good tips on building since he's built two experimentals himself. Also, he is an A & P. Hey, it's great to have a new member who might even know what he is talking about. (Too bad Phil and Bob don't fall in this category as well.)

Kevin Brown is new to the whole scene (Kevin, are you sure you want to associate with this riff-raff?). He does not have a project but he does have plenty of enthusiasm. At present, he is interested in the Lancair and the RV and would appreciate seeing anyone's project. He tells me that he would be thrilled at the opportunity to have a ride in a completed homebuilt. (Editor's remark: Notice that he says a *completed* homebuilt. I think that is very wise on his part--he ain't no dummy.) Also, he is interested in beginning flight training. That's a good idea, Kevin; I was shocked when I learned that my California driver's license didn't entitle me to fly my Lancair. If you would like to talk to Kevin, his home phone number is: 685-9190.

Back in 1976 when serving in the Navy as a photographer, **Ed Perez** joined a flying club and learned to do what most of think is the greatest--no, no, not that--he learned to fly. But being transferred, getting married, raising a family, etc. put a crimp in most all his outside activities. Back to aviation, Ed tells me that he would eventually like to build his own airplane (hence his interest in EAA). Right now he is fascinated with the Velocity.

During my conversation with him, he mentioned that he worked as a quality assurance analyst for Hexcel in Livermore. He described the pre-preg process to me and some of the nuances. Fascinating process.

Welcome also to **Thomas Smith**; couldn't reach you Tom on the telephone but look forward to seeing you at the next meeting.

From the President

I was scanning the Trade-a-Plane classified under "Experimental - Home built Aircraft and Parts." By the word 'scanning' I mean that I was relying on an automatic system within my brain that could recognize a word or phrase in the type as it speeds by my rapidly probing eye.

T-18 proje ... chro ... 95% comp ... plush int ... Stardus ... \$45,000 ... Serious inq ... Smith Min ... Spezio Spo ... Acro Sp ... WAIT! Spezio Sport? Who's got a Spezio Sport? There is just a half a blurb here and a phone number! I gotta call this guy...let's see - 404 area code, that's Atlanta - that figures, half way across the planet.

Let me give you a little background on the Spezio Sport. Back when I was 9 years old and just imagining how keen it would be to fly, Tony Spezio built, out of practically nothing at all, a slick little open cockpit low wing (that folds) dragster that he affectionately called the "tu holer." He started with a smashed cub fuselage, welded up some scrap tubing for landing gear legs, mounted a 125 HP ground power unit engine, built up some spruce wings with plywood D section, and covered it with Irish linen and nitrite dope.



He literally built it with things he found around. The exhaust system was taken from an Edsel and modified by Tony for his purpose. He told me one how much it cost to get his airplane from the thinking stage to the zooming stage...it wasn't very much. He built the wings to fold and a special tailwheel tow bar so he could drag it out to the airport when he wanted to fly, then drag it back to the barn when he was through. Tony was thrifty.

But he had developed several innovations in the "tu holer" that weren't available in other aircraft of the period. He later developed plans and sold them at Oshkosh and through "Sport Aviation" magazine. He renamed the plane the "Dot Spezio Sport" after his wife Dorothy. Soon there were Sports zooming to Oshkosh and other airshows. I went with Tony on his last two pilgrimages to Oshkosh, and listened to him mutter under his breath about "...terrible rib stitch! Look at the drag this thing creates..." He showed the builder of the Hatz biplane prototype how a minor modification to the aileron gap could improve the roll characteristics. Tony made the change and the guy taxied back with a great big smile, gave us both a ride and a free set of Hatz Biplane plans.

How's that for background? Well, back to the present. I called Atlanta to ask about the Spezio, and the man said he had sold it and that it had been crashed. I asked him if he could remember the serial number on the plane, and he said "Number one; it was the prototype." WOW! I called Tony at home and found out that the new buyer had been there to visit him all weekend and bought all his airplane stuff and pumped his brain for information besides. How 'bout that!

I've thought about that 30 year build homebuilt, sport plane this weekend, and compared it to the super fast, super technical, super expensive experimental airplanes that we are building today, and I realized the reason our present day engineers can see into the future to develop advanced aircraft designs is due to the fact that they stand on the shoulders of giants--like Tony.

Glenn

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DUES NOT DUED (OR SOMETHING)

As you recall, in the last Cleco a list was published of the amount of dues each member owed. In our desire to bring everyone into step for a billing year March 1 to February 28 (to hell with Leap Year), we prorated many of you who were paid up to other dates. The proration came to amounts ranging from \$3 to \$17. For those who brought their memberships up to date by paying the proration, we extend a hearty thanks. Your help will vastly simplify bookkeeping. For those who may have overlooked our request, please help make our accounting lives easier. Following is a list of you-all and your prorated amount. For those who owe \$17, note that your membership will expire and you will lose out on this wondrous newsletter.

Name	Exp.Date	Dues	Name	Exp.Date	Dues
BRUCE ARRIGONI	10/30/92	7	MIKE PARKER	09/30/92	8
VERN BOLTZ	12/30/92	3	STUB PILOTTE	07/30/92	12
RICK BROPHY	10/30/92	7	BRAD POLING	07/30/92	12
PATRICK CAMPBELL	10/30/92	7	RICHARD RIHN	09/30/92	8
RONALD CARTER	04/30/92	17	RONALD ROBINSON	12/30/92	3
JEFFREY CULVER	10/30/92	7	LARRY ROESSLER	06/30/92	13
QUENTIN OURHAM	07/30/92	12	DENNIS ROMANO	05/30/92	15
GERRY GRETH	12/30/92	3	DAVE RUEGG	07/30/92	12
JERRY GROVE	03/30/92	18	KAY E. SMITH	07/30/92	12
PAUL KUNKEL	12/30/92	3	Wallace Smith	07/30/92	12
JIM LEWIS	04/30/92	17	NORM SPITZER	07/30/92	12
JOHN LORAM	09/30/92	8	BILL STAUFFER	12/30/92	3
DR. JIM MANOLEY	07/30/92	12	GARY STOFER	11/30/92	5
ANDREW MARSHALL	07/30/92	12	FRANK STORM	07/30/92	12
DR. KEITH MARTZ	07/30/92	12	JAN F. SWITALSKI	07/30/92	12
KEN MCKENZIE	12/30/92	3	DR. LARRY WELTER	07/30/92	12
CHARLES McMULLEN	07/30/92	12	Arthur West	12/30/92	3
PETE MITCHELL	07/30/92	12	JAMES WILHELM	07/30/92	12
HOWARD NELSON	08/30/92	10	FRANKLIN WILLIAMS	07/30/92	12
RAY NILSON	07/30/92	12	MARION WILLIAMS	04/30/92	17
PAUL ORTIZ	05/30/92	15	Ken Yoskowitz	03/30/92	18
			Phillip Young	11/30/92	5

CALENDER OF EVENTS

April 25-26	Columbia Taylorcraft Fly-in
April 25 (or 26)	- unsure of which date Nut Tree something or other
May 1-3	Camarillo EAA Chapt 723 & CAF Fly-in
May 8-9	Fresno Air Faire. Chandler Airport
May 9	Yolo County Breakfast Aviation Flea Market
May 16	Corning, CA Antique Fly-in
May 16	Lincoln Fly-in.
May 22-24	Watsonville Antique Fly-in.
June 5-7	Merced Antique West Coast Fly-in.
Jun 27-28	Truckee-Tahoe Airshow
Jun 27-28	Ukiah Airshow
July 31-August 6	OSHKOSH
Aug 29, 30	Pacific Coast Air Museum (Sonoma County) Open House
Sept 26-27	Reedley, CA Airshow
Oct 3-4	Salinas Airshow

NEW LOOK FOR ADVERTISING

This editor really intends to please (not like that other guy). So that you will not need to turn to the cover page of the Cleco to study the ads, we are including them right in the text. Remember! These people are showing their support by paying the \$35 to have their cards included. Let's you and I show our support by patronizing them!!!

RICHARD S. POWELL



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HOORAY FOR CHAPTER 427 (CHICO)

As pointed out at the last meeting, Chapter 393 was not listed in the 1992 EAA directory. Turns out it was the result of an "administrative oversight"--ours, not theirs.

In any case, we have friends in Chico. EAA 427 *does* recognize us regardless of National. Their March issue comments as follows. "If you are planning any visits, I'm sure Chapter 393 at Concord is still active even if they don't appear in this issue. Use last year's address." Thanks guys.

A PLEASANT LETTER FROM SASHA

We received a pleasant letter from a former active member Sasha Reynolds (formerly Sasha Munir). She has moved to Kelseyville but wishes to keep her 393 membership active. Super. She wants all of her 393 friends to know that she is well and happy and that she has 550 hours and 436 1/2 landings in the Vari Eze. Wait one minute--436 1/2 landings???? I'm new at this flying stuff; is there something I don't understand?

She further tells us that her Eze still flies well and looks great (last trophy at the 1990 Merced fly-in). She and her husband John took some trips last year--one to Oregon and another to Mexico.

And finally she says: "I miss Concord airport, all my friends and the hangar talk very much. Please schedule a fly-in at --we have a large hangar for a good party. Love to all of you, Sasha."


Thank you, Sasha, very nice.

A SAD (OR HAPPY?) OCCASION

Glenn Werner came by the hanger recently with a sad, long look on his face. "I just sold the Citrabria" he said. He was really moping around as he told me about a guy named Marvin Feldhacker flying it off to its new home in Morgan Hill. Poor Glenn, he really looked bummed out.

But now I'm wondering if mine was misplaced sympathy. As I went back to work, out of the corner of

my eye I saw him jump up and click his heels when he walked to his truck.



Off.: (415) 685-4959

RANDY ALLEY
Insurance Agency, Inc.
Agent

1850 Mt. Diablo Street
Concord, CA 94520

CULTURE IS WHERE IT'S AT

Remember that in the February issue of the Cleco I told you to look in the next issue for the answer to the culture matching quiz (Shakespeare plays and airplanes)? Well, keep on looking because I ain't sayin nothin. You don't think I would be crazy enough to put my matchups in writing, do you?

But I do intend to stick with this culture stuff; it really is good for the soul. For this month I have selected some of the more famous quotes from Shakespeare's plays that appear to have particular significance to airplane builders. Just look these over and see how many of them actually apply to your feelings in relation to your project.

1. Now is the winter of our discontent....
(King Richard III)
2. Courage man. The hurt cannot be much.
(Romeo and Juliet)
3. I see thy glory, like a shooting star.
(King Richard II)
4. The course of true love never did run smooth.
(A Midsummer Night's Dream)
5. The devil can cite Scripture for his purpose.
(The Merchant of Venice)
6. Everyone can master grief except he who has it.
(Much Ado About Nothing)
7. O, how full of briars is this working-day world!
(As You Like It)
8. True is it that we have seen better days.
(As You Like It)
9. The time is out of joint;...
(Hamlet)
10. We burn daylight:
(The Merry Wives of Windsor)
11. We are such stuff
As dreams are made on,...
(The Tempest)
12. To-morrow, and to-morrow, and to-morrow
Creeps in this petty pace from day to day,...
(Macbeth)
13. Reputation, reputation, reputation!
O, I have lost my reputation!
(Othello)

The last two are my favorites.

Note: For those of you who do not see the Navaho newsletter, the following was taken directly from the April copy.

MONTHLY SAFETY SEMINARS AT NAVAJO AVIATION

Safety seminars were discontinued last fall due to apparent lack of customer interest and poor attendance. We were very disappointed that these free monthly seminars, which have been a tradition at NAVAJO for nearly 16 years, were allowed to die out

We would like to try again, and we would like your reaction(s) to the following seminar subject suggestion for a *MAY SAFETY SEMINAR*.

Some of the pilots and controllers from Travis Air Force Base have volunteered to come to NAVAJO for a discussion of all aspects of operations in the Travis airspace and approach control. This should be a great opportunity to find out how it really is and who makes it that way. We would expect the meeting to be in the evening as usual.

Please let us know if you are interested!!! Call **MIKE JAHN** or **ESKIL VAN LOOSDRECHT** at NAVAHO AVIATION...PLEASE!!!

POLITICS--EVERYONES FAVORITE SUBJECT

Here I go again--obviously to get my back-end in a sling. This time I have some random thoughts that must lead to some kind of a conclusion.

Here's a two-part question for you to ponder. *Why in the devil* does the Board of Supervisors commit significant funds to provide open space around the Byron airport?? *Why commit all that money to undeveloped open space????*

Now that's a *dumb* question, isn't it? Obviously, it's ludicrous to allow development right up to the edge of an airport. The Board is simply ensuring that Byron is done right and that 20 years from now hindsight will say "good planning."

But wait, what kind of dichotomy in thinking do we have here? The County spends hefty funds to buy land to provide open space at Byron yet makes land **immediately adjacent to Buchanan Field available for development**. Being new to aviation, perhaps I simply don't have the insight and understanding of reality of our representatives on the Board. But my simple mind suggests that standards deemed important to Byron should apply equally well to Buchanan. Could it possibly be that incumbents are influenced by those that help keep them in office more than they are by good sound practice and the safety of their constituents?

Most of us know or know of Grace Ellis. She served for 21 years on the Airport Land Use Commission representing the 4th supervisorial district. We also know that she ran for the 4th district seat against the incumbent and made a very credible showing. Her reward for *daring* to run against an incumbent?? She was unceremoniously dumped and replaced by an individual with little aviation knowledge. Something is sadly wrong with our democratic system when a citizen cannot run

without incurring the wrath of those in power for daring to challenge. It's too bad that our politicians are unable to follow the example set by Abraham Lincoln who appointed political enemies to his cabinet because they were the best qualified.

As a rule, an incumbent is virtually guaranteed reelection (thanks to voter apathy) unless he or she makes a real blunder.

In March the Supreme court ruled that California's term limitation laws are legal.

The House check-bouncing scandal once again gives you an idea of the abuses that commonly accompany power.

Incumbents are beholden to those who help put and maintain them in power.

Question: What's the difference between the "Soviet Union" and layers of government in the United States?

Answer: The officials responsible for the economic ruin caused by poor central planning and government subsidies have been run out of the "Soviet Union."

Here're a couple great acronyms for political action committees that I saw in Ron Sorenson's Navajo newsletter. They are *DRIP* (Don't Return Incumbent Politicians) and *VETO* (Vote Entrenched Taxsuckers Out).

What am I getting at??? Could it possibly be that I'm fed up with the many politicians who make maintaining their incumbencies (and empires) their primary priority? Could it be that I feel that term limitations (in spite of prohibiting good people from continuing in their office) might be the only reasonable way of achieving some sanity in politics? Could be.



Patience is a virtue. Some things are worth working toward and being patient for. Like an airport.

INTERCEPTED FROM THE AIRWAYS

An American Airline DC-10 was rolling out after smoking the runway at San Jose. The tower advised as follows: *SJC Tower:* American Three Five Five, if able, turn right at the end of the runway. If unable, take Highway 101 and use the Guadalupe exit.


A recent McCarren ATIS went like this.

"This is McCarren International Departure information Delta. 2000 Zulu, (weather, approach info, notams, etc.). Arriving aircraft contact approach 118...(silence). You lousy machine, why do you always do this to me?"

Mooney 666RG: Van Nuys Tower, Mooney Triple Six Romeo Golf, over Newall Pass for a straight in with Charlie.

Van Nuys Tower: Mooney Triple Six Romeo Golf, follow the F-16 on a four-mile final.

Mooney 666RG: ...I'll try.


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PERSONAL PROFILE--ED VALLEJO

I never cease to be amazed as I interview our members for this column. As Harry Heckman said: "an exceptional bunch of people." This month I had the pleasure of being impressed with Ed Vallejo. I've always thought Ed was a neat guy but maybe a little strange. Now I know why. He was born in Berkeley (1954), and if that isn't enough, he has lived his *entire life* in California. He went to school in Walnut Creek then on to college at San Jose State.

But before we get into that kind of stuff, one of the real fascinating tidbits that I learned from him is that he is a direct descendant of M. G. Vallejo the Spanish military commandant in charge of Northern California. (Vallejo was Ed's grandfather's great grandfather.) Ed tells me that Vallejo was, among other things, a real horticulturist. He introduced grapes and a variety of different trees to Northern California. The original Vallejo house in Sonoma has been completely restored and Ed has visited it a number of times. Must be quite a thrill.

Let's get back to where he got his "larnin." When he got out of high school, college was the place to go: not so much that he wanted to but because his parents wanted him to (a familiar story). To start with, he won a four-year scholarship from Heublien Corporation so somebody must have felt he had something on the ball. Once in college his major focus was art. Like the average unfocused kid in college he went from art to police science to photo-journalism and back to art where he got his BA in art with a concentration in crafts.

If you want to talk about outside activities, Ed really takes the prize. In high school he swam competitively and ran track (180 yard low hurdles). He has enjoyed scuba diving, hunting, fishing, back packing, snow and water skiing, dirt bike and road racing, and horse-back riding. I'm not sure, but I think there were a couple activities I missed.

If you bring up the subject of motor driven machines, you had best set back and relax because you will be in for a lonnngng period of ear bending. He loves motorcycles. His great uncle was Albert "Shrimp" Burns, a Harley-Davidson factory racer. Among his accomplishments, he held the track record for Michigan State Fair (1913). Sadly, he was killed during his last scheduled race before retiring.

Back in his early days he ran MotorSport (a motorcycle accessory store) down in Campbell. When he started telling me about all the motorcycles he has owned and rebuilt, it was like an alphabet soup. What the hell do I know about the Yamazuki 9500 cc inverted whiskey injected (or whatever) road bike? His current bike restoration projects are a 1979 Suzuki RM (state of the art motocross for the time--now an antique) given to him by friend who considered it a lost cause and a 1973 Yamaha XT650 twin (Japanese copy of Triumph 650) which he must detail out. On top of that, he is rebuilding a '74 260Z. He simply loves restoring things--not just cars. Oh yeah, can't forget about the 1957 25 foot Cutty class cabin cruiser (a boat) he spotted in a vacant lot off the freeway near Dublin. He bought the boat, trailer, and motor for \$500 and is working on it.

He shares his love for bikes with Rich Powell with whom he has been close friends since the fourth grade. They have planned an annual motorcycle run throughout California--last year was the first time and they did 1200 miles in 4 days.

To describe everything he enjoys and seems to be good at, would take an entire issue of the Cleco. He likes his own gourmet cooking; his favorite dish is roast wild duck--duck that he himself has hunted. He is a self-described animal lover--he had an Akita Shepard mix for 14 years. The death of that dog was a real heavy number for him. After that, he said "no more." However, his lady friend prevailed and they now have another dog and two cats.

He likes music--everything, big band, enjoys classical, country Western; he has even played piano, drums, and guitar. He likes museums and art displays. Even thinks that someday he might like to be an artist.

In addition to running a motorcycle shop, he has worked for Titan Beta of Dublin (builds linear accelerators) off and on for 10 years. He started as mechanical technician doing mechanical drafting and technical work and was recently promoted to production control scheduler. In between stints at Titan he worked as the operations manager for Paragon Aero for about 8 months before they closed the doors. (Paragon Aero should be the topic of a later newsletter--a fascinating subject. For those of you who are "new" like me, it involves some of our people.)

What about airplanes? He is currently helping Lyle with the Glasair III. For himself, he has completed everything but the check ride for his license. During one solo session freaked out when he went into a spin from power stall in a Cessna 152. He was convinced that he would be on 5:00 news. However, he remembered what Lyle said "Stick forward". He hasn't done much this past year--just too busy. He tells me that as soon as Glasair is finished he will get back into flying.

What else is there to say about Ed Vallejo? The answer is "a lot." He is certainly one of the most interesting and fascinating people I have talked to in a while. Thanks for taking the time, Ed; you're a neat guy.

FROM LYLE POWELL

Recently Lyle submitted the following article on the angle-of-attack indicator to the Glasair news. Although his observations relate specifically to the Glasair, they have implications to all of us builders of high-performance

aircraft. He has been kind enough to submit his thoughts to the Cleco for publication. Thank you, Lyle

An Observation Concerning Glasair Accidents

There has been an unfortunate number of Glasair accidents in 1991. As is usually the case, most of them were approach or departure accidents.

One recent accident was a repeat of one which I observed several years ago, in which the pilot lifted off prematurely at a high angle of attack and despite maximum rudder and aileron deflection he drifted off to the left and crashed. Another one of this type was the loss of the Turboprop Glasair.

V_{mc} is a term usually applied to twin engine airplanes, to describe the velocity of minimum control when one engine is lost. But singles exhibit V_{mc} also, because of the right-hand offset of the thrust line at full power and especially at high angles of attack. The thrust line moves further right as the angle of attack increases because the downgoing blade then has a much steeper bite than the upgoing blade, thus producing a left turning tendency that overcomes the airplane's control capability first in yaw, then in roll.

The obvious answer to this is to delay liftoff until the angle of attack necessary to support the airplane is beyond this threshold of V_{mc} . Notice that I didn't say "until it has sufficient airspeed" -- although that is secondarily correct. The airspeed necessary to stay below the critical angle of attack varies almost entirely with the weight of a given airplane. And the catch in a small airplane like the Glasair is that a significant percentage of gross weight is represented by a single passenger or more-than-usual fuel or unaccustomed baggage. This difference in weight then dictates a significant increase in airspeed (often 12-15 MPH) to maintain the same angle of attack which is necessary for flight--which is why V_{mc} is always stated at a specified gross weight.

The whole problem is then compounded by the ground effect, in which, because of reflected downwash, the minimum airspeed for flight is minimized. As you try to climb out of ground effect (approximately 1/2 span altitude) the required airspeed increases. This leads to the full power, nose-up mush below V_{mc} , and the inevitable drift to the left. In other words, the V_{mc} in ground effect is less than that out of ground effect, as well as for different gross weights.

I think by now my point is obvious--it's the angle of attack that we should be watching--not the airspeed. Look at all the jets, both small and large, and you'll see angle of attack indicators in all of them--straight wing or swept wing. The use of "bug speed" is merely the adjustment of airspeed to match the required angle of attack. Gradually the direct use of angle of attack is being used instead of "bug speed."

Premature liftoff accidents are more likely in fixed-pitch Glasairs than those with constant speed props because the "blown tail effect" is significantly greater when the engine develops full power at full RPM. Thus the rudder effectiveness is artificially enhanced to offset the left turn tendency.

Another factor here is the adverse yaw that the Glasair exhibits at high angle of attack. This then

aggravates the directional control problem when it's allowed to develop.

In pattern maneuvers, the stall-spin from the base-to-final turn still occurs--and at ordinarily satisfactory airspeeds. This occurs because the maximum angle of attack is exceeded by the bank angle force and the use of skidding rudder (which increases the angle of attack of the inside wing).

The other important category of accidents occurs on approach to landing. Recently a friend returned to his home field with a full fuel load and an unusually heavy passenger and his baggage. He used his usual approach speed, flared just before the threshold--but the plane didn't flare--it dropped right through the ground effect and landed 5 feet short of the threshold: **5 feet!** The gear was torn off and the repairs will take about a year to complete. This pilot is a 10,000 hour pilot who simply doesn't believe in angle of attack; "airspeed is what you fly with." If he'd had an angle of attack indicator, it would have told him that his accustomed approach airspeed was too low.

The Glasair III is a high wing-loaded airplane, especially the ones with 23 ft. span--approach angle of attack is especially critical in these, and several of the accidents have been simply misjudged approaches of one sort or another--resulting in hard landings or excursions off the runway, or landing short. Landing one of these airplanes is certainly an instrument procedure, and the angle of attack indicator should be the primary instrument.

The angle of attack indicator is a direct lift coefficient indicator. Each airplane (mostly the wing) has a built-in and unchanging lift-coefficient to angle of attack ratio. This ratio applies at all weights, temperatures, altitudes and C.G. locations. It varies slightly with flap deflection, but this is a fixed variable from the flaps-up condition, and is easily accounted for. Remember--the angle of attack is the angle of the chord line of the wing to the incident air flow. This angle is presently determined by two types of instruments: the trailing vane indicator and the differential pressure indicator. The trailing vane simply aligns itself behind its pivot axis and transmits this position to an indicator electrically. The differential pressure indicator compares a straight ahead air sample such as from a pitot tube with an air sample from a tube pointing 60°-70° below the wing chord line. These pressures are conducted to a differential pressure gauge (such as an airspeed indicator with a recalibrated face). A variation of this, which I used on my Glasair I, is the use of a hole at the leading edge and hole in the lower wing skin about 12% of chord aft of the leading edge. These were located in the wingtip just outboard of the fuel tank. The indicator is located high on the instrument panel, or half buried in the panel cover above the other instruments. This is so that it can be seen in your para-central visual field as you're landing or taking off. It's useless if it's buried down out of sight while looking out the windshield.

Take-off and landing are actually instrument procedures in high performance airplanes. The "feel" of the airplane can be as misleading here as in any other instrument flying. On takeoff, when the minimum alpha (angle of attack) is reached, raise the nose--but never so quickly or so much that the alpha increases above that known maximum. Then transition to the alpha that corresponds to V_x , then to the alpha for V_y and so on. In

pattern turns, or slow flight the alpha for V_x is a good minimum. On final approach the same figure is about right to correspond to the $V_s \times 1.3$ at a specified gross weight--which is often quoted as optimum. If this is done, you'll not find yourself suddenly "behind the curve" because you're automatically at the right airspeed for your weight.

As the threshold is crossed, alpha is increased as the power is reduced, and touchdown will occur as you reach that maximum figure on the dial--no matter how heavy, hot or high you are. You'll notice that the airspeed is quite variable, mostly with weight.

Stall will occur at the same alpha at any airspeed, any gross weight, any density altitude. The angle of attack indicator is incidentally a sensitive windshear detector, 3 to 5 seconds quicker than airspeed change.

About 15 years ago in "Sport Aviation" in the Technical Tips department I wrote a short descriptive article on how to construct this differential pressure type of alpha indicator. Others, including Burt Rutan have published a plan for the trailing vane type. Another type, in one of the popular aviation magazines by Joe Kramasz, using the trailing vane and a series of small L.E.D.'s or lights on the glareshield. Also, *Safe-Flight* manufactures one that uses the leading edge vane that looks like the conventional stall-warning device on production airplanes. It has a meter that is placed on the glareshield. This was standard equipment on the Beech 99. I had one in my Baron in the early 70s.

The easiest type for us is the one using an airspeed indicator as a differential pressure indicator and the two pitot tubes--one straight ahead and the other one 65° below horizontal. I prefer the one mentioned before with a hole in the leading edge and a flush hole 12% of chord aft on the lower skin because it avoids the protruding tubes. However, the tubes need only be 1/4" tubes and that's not too draggy. Another type of differential pressure transducer is like the one used on the Cessna Citation. It has a tube projecting sideways out of the nose. It is divided into two chambers, lengthwise, with small holes into each. One set of holes faces forward, the other set about 70° downward. A solenoid rotates it slightly with flap deflection. This same type is used on several military aircraft. I made one of these for my Varieze 15 years ago--it worked well. One of this type of transducer could be attached to the side of the heated pitot tube, under the wing.

As experimental aircraft builders, we should all be able to construct one of these indicators--and use it. We must reduce the number of approach and departure accidents we are having with our Glasairs, and this is one good way to do it.

Despite my crusade for the angle of attack for flight guidance, there is another way to accomplish much the same thing. That is--keep in mind not one airspeed for liftoff, one for approach, etc., but three. One for light-weight operation, one for mid-weight and one for heavy-weight. Two are not enough -- you could still be off by easily 5 MPH. For instance, landing approach in your 23 ft. span Glasair III: 105 light-weight, 112 mid-weight and 120 heavy. Same sort of spread for liftoff, with about 15 MPH spread between extremes. It's not as good as looking at an indicator that always tells you the same thing. But it's a lot better than using a single airspeed for guidance. That's the habit that is the root cause of many accidents.

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