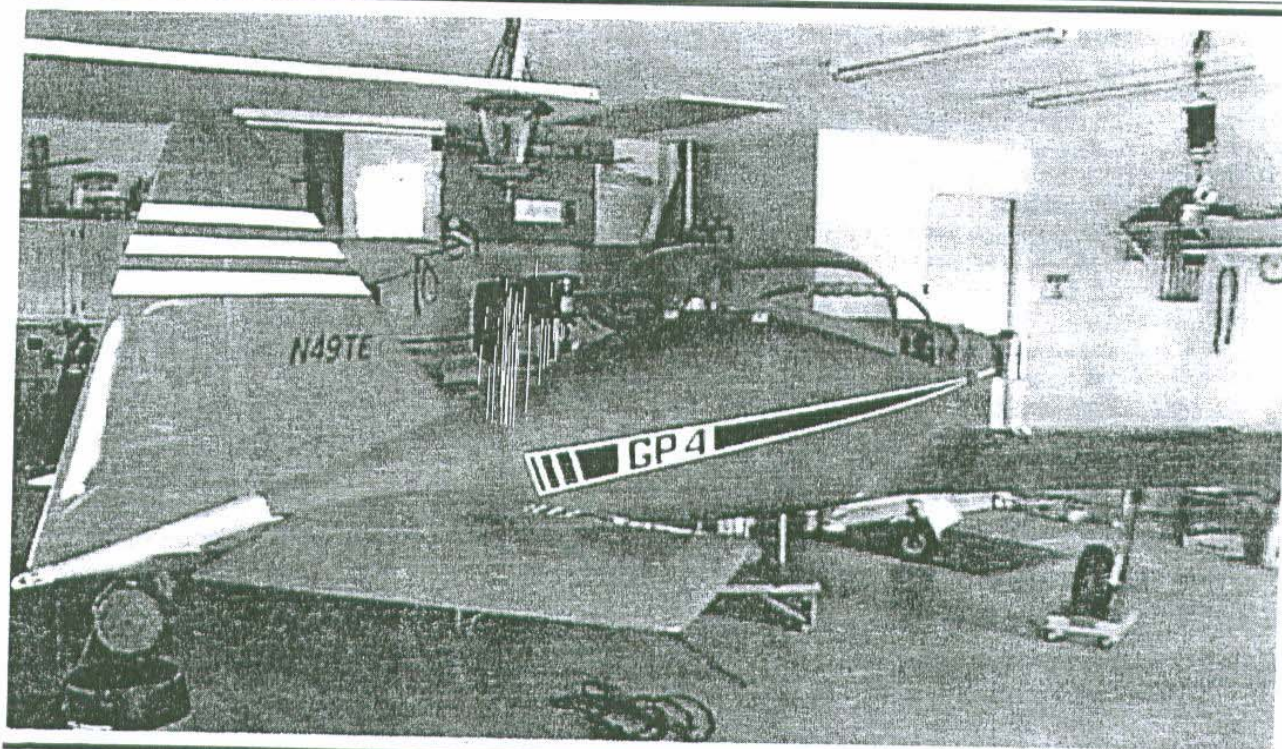




THE OFFICIAL VOICE OF GP-4 BUILDERS ALL OVER THE WORLD

VOLUME 17

NOVEMBER - DECEMBER 1997



### *Thomas Evans GP-4 of Lake Wales, Florida*

Dear Spud,

Hello, My name is Tom Evans GP-4 builder serial #49 and I thought I would send to you a few notes about my experiences building the GP-4.

Recently while on a business flight I took the opportunity to write down a few notes and to my dismay, I found it difficult to remember exactly when my project was started. Having promised myself to be flying within five years from the start of the project, which was very aggressive

considering my occupation as a traveling sales rep., I am still working on the plane after nine years on the project. Don't get me wrong-I'm not complaining for I have enjoyed every minute working on the project, but I am getting anxious to fly this bird.



## "Evans" continued

During the last nine years my wife and I both had surgery requiring a recovery period and a job promotion that moved us from Indiana to Florida. In all it took away approximately two years of building time, but enough with the excuses and onto where I'm currently at with the project.

I'm currently working on the plane at our new home outside of Lake Wales (I forgot to mention this excuse). I built an oversized air-conditioned garage to accommodate the plane plus all my tools (one car included), which was a good move. Because of the intense heat plus humidity during the summer, I wasn't doing very well in the hangar at the airport. For the painting process, I built a paint booth complete with an exhaust fan and filters to control the mess (orders from the boss). At this time the airframe is painted and ready (it looks like George's color scheme - I hope he doesn't mind) - the engine compartment is the area I am now focused on.

I can say the construction of the plane has been most interesting and very educational as well. If you start a total scratch built airplane like the GP-4, you will have a very good understanding of the word dedication. I remember George's statement in the builder's manual said something to the effect, "don't get overwhelmed looking at the plans-just get started and it will all come together." - I found his statement to be very true.

Having built many RC models over the years was very helpful; however, due to the size of the plane I found out that it requires paying close attention to detail and you must have organization to make it happen. There are many time-consuming projects and you may find it helpful to set some goals. Determine what stage of the project is going to be worked on next and by what date it is to be completed. I found it very satisfying when I completed certain stages such as the wing spar, fuselage frame, or the landing gear

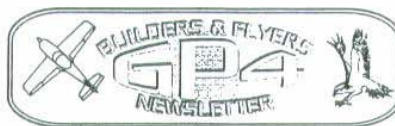
(which was a challenge in itself), etc. It was especially gratifying near the date estimated for completion.

The power plant that I have chosen is a modified Buick 215 (fuel injected via "Airflow Performance") with a Ross Aero 2.17 reduction gear system and a 3-blade wood prop (Performance Propeller). This is a departure from the IO-360 recommended and controversial at best, but it is what I decided to do. I am not going to brag at this stage and won't, until I have it running and the engine has proven to be a winner. There is no question that it has slowed me down for there are many things to consider when installing an auto engine in a plane with no track record...you just don't know for sure what to expect. I realize the performance will not be in the class of George's bird, but I do believe 190-200 mph cruise is a possibility and that would be OK. It will take just a little longer getting there that's all.

In closing Spud I would like to say to your readers-if you're the type that likes to create things, you're going to love the GP-4 project and I highly recommend it. I do plan to keep you informed as to my progress. I want to thank you for the effort you put into the newsletter. I do realize how much work it takes. If anyone wishes to contact me I will be happy to talk with them. I am not an expert but I will be glad to discuss my experiences in the building process of a GP-4.

Sincerely,

**Thomas Evans, Sr. - GP-4 49TE**  
411 Starr Ridge Loop  
Lakes Wales, FL 33853  
941-676-4346



## **Multicom!**

### ● Applause, Applause!

The excellent article that ran in the January issue of Kitplanes on the GP-4 and Osprey II was a direct result of you people that took the time to give a factual and positive report! Guys you did good! You made us all proud of our GP-4. Also "Thanks" go to Don Downie for putting the entire GP-4 package together for this excellent article!

### ● Well deserved Kudos.....

I have always been interested in the GP-4 design and after seeing the white GP-4 of Bill Berrick's at Oshkosh this year I felt compelled to find out more about the GP-4. If Bill Berrick's GP-4 was not this year's Grand Champion homebuilt I think I will have lost faith in the judging process.

David Knuth - Beecher, Illinois

### ● George Pereira goes global...

We now can contact George by E-mail via his step daughters E-mail address. Gayle, George's daughter has offered to be the relay point to contact George by E-mail. There will be a day or so delay so your patience is appreciated. That E-mail address is "GP-4@juno.com". When submitting questions to George please "CC" or "forward to" (This depends on your server) me also at "Bspornitz@aol.com". George/Gayle then will "CC" me with the response. I then will post the "question and response" if appropriate in a upcoming newsletter to share with the other 135 builders.

### ● Illness at the Pereira's:

Peggy Pereira (George's wife) had



a stroke this past summer and she is recovering slowly at home. She is going through quite a bit of therapy which is administered mostly by George. If any of you have experienced any delay in getting a response from George this was probably the cause. I told George in behalf of the entire group that he shouldn't hesitate in skipping any amount of issues in regards to articles. With all this going on George still had a nice article for this issue. So while Peggy is recuperating at home, George will be pretty close to the phone.

***Peggy.....In behalf of the entire GP-4 and Osprey II gang we wish you a speedy recovery !!!!! Come on Peggy!!!!!!***

Also from Gayle

Dear Spud:

Peggy is a little better but still lots of work to be done. George is working with her on Physical Therapy, so he is home a lot. He said he didn't mind phone queries or e-mail. He said it would be O.K. to mention her setback. It might explain why he has been tardy with some mail. He is working hard to help Peggy make her recovery possible. Thanks for your kind thoughts.

Gayle (George's Daughter)

#### ◆ Where's Jackie Yoder

had promised in an earlier issue that we would do an up-date on Jackie and his "Pink Cotton Candy" GP-4. I apologize but I haven't taken the time to finish the update. I'll try to finish it up for the next issue of 1998, #18 - Spud

#### Last issue - Time to renew.....

the number on your address label says last iss #17", its time to renew your subscription. Please use the yellow renewal enclosed in this issue.

#### ● Suggestions.....

Hi Spud,

Just received my latest copy of the GP-4 newsletter, and once again you have published a very nice issue. I was one of those at Oshkosh and watched Bill take off in his beautiful GP-4 and saw him seem to struggle with the gear, so the article about the assist seems particularly appropriate.

Regarding the use of an electronic bulletin board, why don't you mention the one on AOL, in the message boards for Aviation Forum? Just use Keyword: Aviation Forum and go to the message boards; it's under the homebuilts and experimental category, which I'm sure you know, because I've seen your messages there. It's extremely under-used right now. One area that could be addressed is that at the builders meeting in Oshkosh, comments were made that there are some typos or errors in dimensions in the plans in a few places. If people could make the corrections, it could save them a problem or two.

OR, maybe someone could do a web site. AOL will let any subscriber set one up for free.

Thanks again for all of your work with the newsletter.

Steve Weinstock  
Elmhurst, Illinois

#### ● Optional Questions.....

On the subscription renewal you'll find some optional questions. And that's exactly what they are "Optional". We're just trying to confirm some areas of previous interest. -Spud



## Editor's Corner

This is our 17th and last issue of 1997. We've covered a lot of ground since the first issue March/April 1995 when we first introduced the newsletter. We have 135 subscribers as of this writing.

I do need to start off by apologizing to a lot of you (particularly C.J. Reinhart, Jackie Yoder, Stan White & etc.) that have submitted articles with technical drawings and/or photo's that depicted on how you made this or that, or a neat jig you came up with to hold or roll a part of the aircraft during construction. I want to re-draw these drawings and/or put proper captions with the photo's prior to placing them in the newsletter. A little bit more than a year ago I took a promotion at work (Or maybe I should say demotion with more pay!) which has had me gone from home more than I had anticipated and virtually took 95% of my Saturdays. I didn't get a thing accomplished on my airplane this last year (This is not good!). Well that's all about to change on the first of January as I start a new job (Gulp!!) that will have me at home in the evenings and weekends 95% of time. This will afford me more time for the details of the newsletter and more time to work on the project. Please...Don't get me wrong, I truly do love doing the newsletter, I like it a lot! Matter a fact if I could do this full time. (HMMMMM, how could I .....)

Lets talk about newsletter contributions, in regards to information and/or articles. The flow of information so far at this stage of the game has been good and I thank those people that have submitted information so far. I would like to address the people out there that also have a

*continued on next page*



## Airframe and Powerplant Tips From Thomas Kallos

ton of knowledge to share with the group. Everybody has something to offer! I've heard and/or used every excuse under the sun. Some of the more popular ones are "Oh...I'll just wait and see what everybody does", "I don't have anything to offer" (this guy built and is flying a another airplane), "I'm not done with my airplane, yet", "Oh... there's smarter people than me!" etc, etc, etc. This is all just "Cubic Bull B.S.!" I've learned much more from "time under the belt" than I learned in school. I can write you a novel on what I have done the wrong way and had to redo. You send in your information and photo's, no matter what the topic is (as long as it has something to do with a wooden aircraft, GP-4 or engines, etc) aircraft in anyway), write it, type it, call me - I'll interview you right over the phone, E-mail me. I'll slice it and dice it and place it in the newsletter at the right time. Gentlemen (Ladies too!) if you never send it in, it will surely never-ever get printed. I have never not talked to single one of you where as I didn't learn or re-confirm something. So what are ya waiting for..... tell us what you know. We'll all be the better for it!

I sincerely hope you stay with us as a subscriber as the group continues to grow into 1998.

Very Best Regards,

**Spud Spornitz**



Hi Spud,

Enjoy the newsletter and in response to a previous request here's some input. Will leave it up to you if it's appropriate.

I'm a retired aerospace engineer with a number of FAA ratings including mechanic Airframe and Powerplant with an Inspection Authorization.

The GA fleet as we know is aging and as such requires close scrutiny during inspections and maintenance. Homebuilts on the other hand are relatively new and therefore do not require the same inspection criteria plus being "Experimental: leads to laxity. I hear this quite often and my reply is usually - "You're Wrong". I don't believe in the saying "cats have 9 lives" either. Not all "Homebuilts" are prize winners. The majority however are well built and functional, but in my rounds to the fly-ins, etc. can be quite revealing and open inputs and let the chips fall.

1. When you started your GP-4, you hoped you did all the work required by the Federals to obtain the necessary authorization to do your own maintenance. There are however some rules relating to certified engines and propellers.

2. When performing maintenance may I suggest using a checklist. FAR part 23 Appendix D provides information relating to inspections. You can use this as the basis for generating your own checklist. The FAR's require that I use a check list and believe me it's a the best way to go on your pride and joy.

3. During construction - follow the plans. George did a great job on the GP-4 plans. Talk to George before you deviate (for thinking of it) from the plans. This is not the time to think about "CHEAPER" materials or hardware.

4. Use only quality material/hardware. George has called out on his drawings A/C grade hardware/materials. The AN and MS etc. hardware has been tried, tested, proven, and reliable is use.

5. Use good shop practices and techniques during construction and also maintenance. In the event some are not familiar with another excellent FAA document get a copy of AC 43.13 - 1A/2A ACCEPTABLE METHODS, TECHNIQUES AND PRACTICES - AIRCRAFT INSPECTION, REPAIR AND ALTERATIONS. They contain a wealth of information including all you ever wanted to know about weight and balance. The information contained within this document can be applied to homebuilts.

6. If you acquire an engine prior to need, protect your investment and observe the preservation techniques provided by the manufacturer. Make certain that you have engine operating data to follow and follow it to the letter. Forget the mythology and shade tree mechanics input. To go a bit further let us assume that the A/C has been completed and you've been flying it quite often, but if you are going to be standing down for a extended period of time. Preserve the engine and don't neglect the rest of the airplane. Before you "Store" the aircraft clean the engine and the airframe inside and out. Wax the exterior. use protective



covers over the engine and canopy. Also visit your pride and joy on a regular basis. Some of the production aircraft companies have information on the care of aircraft during storage and this can be of assistance to you.

7. Constant speed propellers and control systems also require attention. In the event of a problem, I would suggest contacting a certified mechanic for direction. Prop maintenance requires special skills and training normally found in authorized propeller repair stations.

8. This last one is really a hummer-engine break-in. Aircraft engines were designed for use and not abuse. Improper break-in results in unsatisfactory operation as well as expensive repair. The manufacturer has very specific procedures to be used during the break-in whether it's a new engine, rebuilt or overhauled. Follow these procedures to the letter. One thing that leads to problems is operation to "Save the engine" or to "Baby the engine" It simply does not work! During break-in avoid overheating the engine. A common mistake concerns engine baffles that aid in cooling. The flexible baffle material must curve in towards the engine. By good authority that a hole the size of a quarter in the baffle can reduce cooling efficiency by 20%, on a closely cowled. Check for leak - oil or fuel, and the general integrity of the engine. Strongly suggest a qualified mechanic to assist at this time. Sure you built it, but there is a time when an experienced mechanic can point out things that require attention and have simply been overlooked.

Well I guess that's it for this time.

**Thomas Kallos**  
444 Saratoga Ave # 2L  
Santa Clara, California 950508  
GP-4 Plans #165

## George's Corner



Fellow GP-4 builders:

By the time you read this Christmas will be past and 1998 is upon us. I presume you all received a new IO-360 under the tree! If you didn't its only because they are so difficult to wrap!!! I do hope you all had a happy holiday season.

### ● Plans Change:

I have made a recent change that you should make to your plans. DWG # 33 left bottom of the page marked with a (A). Copy says 7/16" X .065 tube should extend etc. This tube should be 1/2" X .065 so it can be reamed to 3/8" instead of 5/16". We are going to use a 3/8" stud made from an AN-6 bolt in place of the AN-5 bolt. If you have already made the gear leg with the 7/16" tube you can ream it to 3/8" I.D. and still use the 3/8" diameter stud. On drawing 35, center and bottom of the page shows a full scale short link. The threaded rod end shown is an AN490HT11P. This should be changed to an ANHT14P (2 required). The rod end bearing Heim HF-5 should be changed to a Heim HF-6 (3/8" bore and shank). The check nut is also changed to an AN316-6. I have notified Wicks Aircraft of these hardware changes for new orders. I am sure they will exchange your parts for you.

### ● Nose gear door:

(See drawing on next page)

The nose gear door link shown on drawing # 56, top left of page can be difficult to adjust. Darry Capps came up with this alternate method of closing the door. I retrofitted this door closure after seeing how trouble free Darry's was. The ball bearing rides up and down the 2" strut as the geometry changes with retraction. The springs are stretched further with gear up which keeps the door tight against the bottom cowl opening. If you have trouble adjusting the link in your nose gear I highly recommend this alternate linkage for closure.

There was a nice article in January Kitplanes on the GP-4. Builder feed back, etc. I believe its available on most magazine stands.

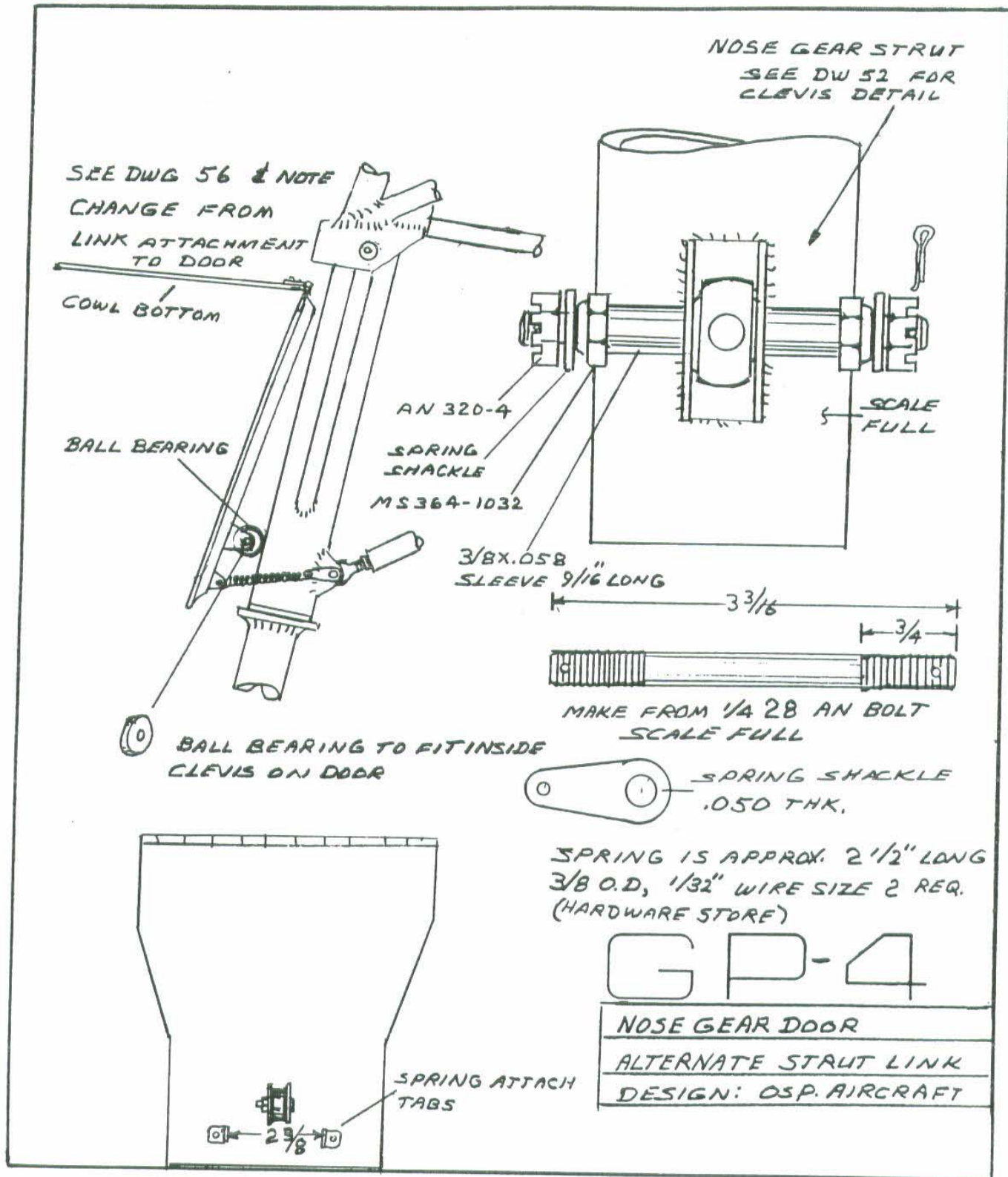
Winter in Sacramento, December through February, brings lots of valley fog and some rain. Our buzzard flights are few these days.

I am spending a lot of time at home these days, so phone calls can usually find me here. If you need some help, please don't hesitate to call (916) 483-3004. My step daughter Gayle has given Spud an E-mail address (see "Multicom" section) for her computer where we now can also communicate electronically.

Regards to all,

**George Pereira**







## THE CLASSIFIEDS

**For Sale:** **New Hydraulic Gear Plans Upgrade.** Convert your GP-4 manual landing gear system to hydraulic - electric system. Complete with emergency back up system. (Note: System must be installed prior to wing skinning!, no retro-fits) Complete print package for \$150.00 Mail your checks to: George Pereira 3741 El Ricon Way, Sacramento, California 95864 phone (916) 483-3004

**For Sale:** **Pre-fabricated composite components for GP-4.** Cowling - \$750.00, exhaust blisters - \$110.00, inlet ramps - \$110.00, tailcone - \$105.00. Complete four piece package for \$1000.00 and \$75.00 for packaging charges. Shipment will be sent "Freight Collect" - Jake Jackson - Rio Linda, CA (916) 992-0608\_E-mail J7200@aol.com

**For Sale:** **Quality custom fabricated metal components for your GP-4.** See GP4BFN issue #4 for complete component listings and pricing. Please allow generous time allowances for your orders. Darry Capps, 813 Hoyer Road, Newman, California (209) 862-2707

**For Sale:** We have all of the GP-4 back issues (1996 and back) available for \$3.00 each. Mail your checks to Bill Spornitz - 1112 East Layton Drive - Olathe, KS 6061-2936

**Wanted:** Looking for a GP-4 project that is "well under way" through "close to being finished". Will consider all projects. Contact me at (503) 646-5276 or by mail at Edward Mitchell, 13835 S.W. Devonshire, Beaverton, OR 97005

**For Sale:** Holley fuel pump #12-802 and Moroso #65770 high pressure spring as depicted in GP4BFN #14. \$110.00 for both items. Shipping charges inside the U.S. \$10.00. Shipping charges outside of U.S. will be quotes on request. Mail your checks to Bill Spornitz - 1112 East Layton Drive - Olathe, KS 6061-2936 evenings after 6:30 P.M. (913)397-0518 Phone and Fax line



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**913-764-5118**



## ***Just when you thought you had heard it all...***

My pilot friend Doc Brown came up to me at my hangar today. He said "Nate, did you hear the latest about the FAA?" His face was unsmiling.

"No, what's up, Doc?"

"Well it seems that our friends the Feds got a tip of an improperly certificated pilot flying commercial sky-diver ops." Now about this time my mind is running away and thinking about the idiot that flew the 7 jumpers in the 210 about a week ago killing the whole bunch 'cause he was out of CG.

Doc continued his story, never smiling. It seems that acting on the tip an FAA rep went out to the local sky-diving center last weekend and proceeded to "card" a pilot loading up jumpers. All the airman could produce was a student permit. Well, the Fed knew that he had this guy dead-to-rights on a really flagrant violation. None-the-less he was most polite in informing the aviator that he was in violation of the FARs and appropriate action was forthcoming.

"Oh, excuse me, sir. You don't understand", said the student. "You see, I usually haul 6 jumpers. Okay? Well, the 6th guy out the door is always my instructor. I am signed off to solo the airplane. All I do is take the ship back and land it."

Respectfully submitted for everyone enjoyment, Nate Rambo - Camarillo, California



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