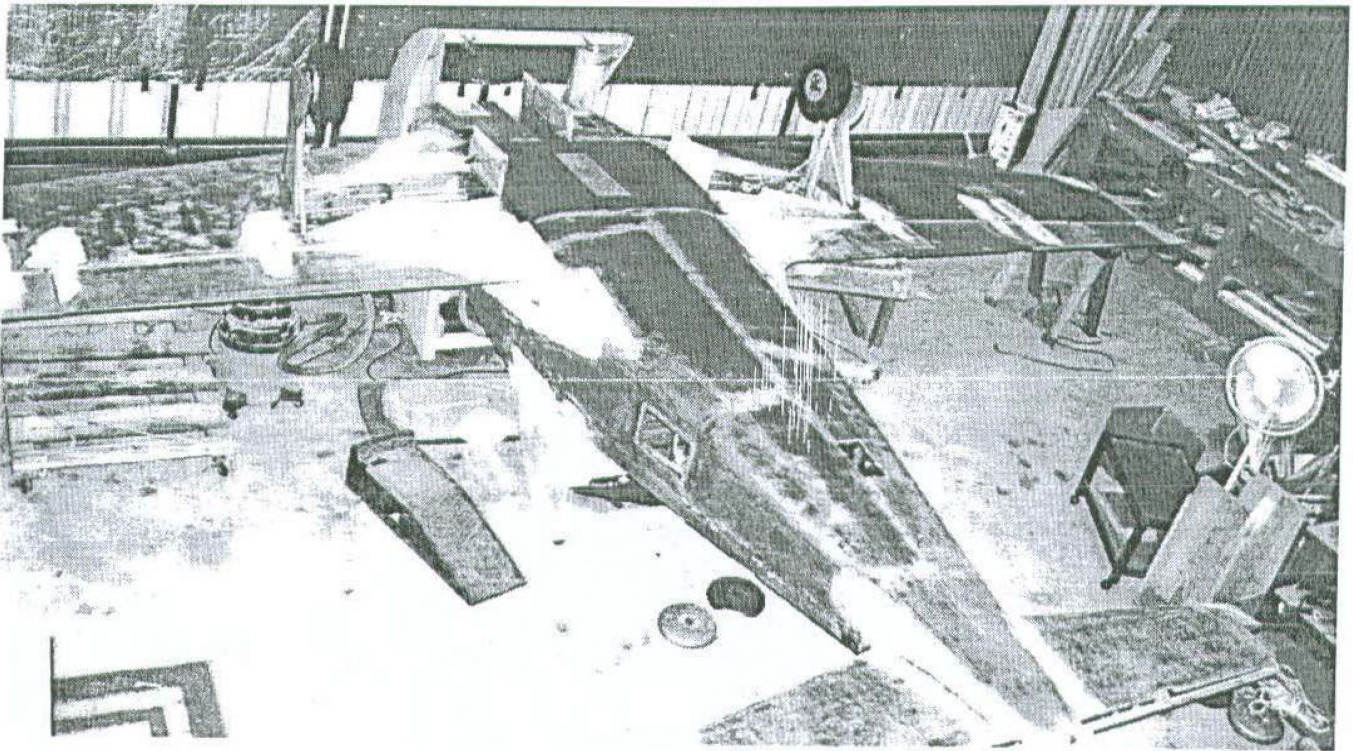


BUILDERS & FLYERS  
**GP-4**  
NEWSLETTER

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

VOLUME 24

FIRST EDITION OF 1999



***C.J. Reinhart of Fort Worth, Texas getting closer to that first flight!***

Hello fellow GP-4 builders,

Here's a quick updated on my GP-4. 2-8-99 - Yesterday - After 5 months - I finally finished the bottom. All those fillets, fairings, doors and stuff, I'll put primer on the bottom before turning over.

I'll be using PolyFiber water-based stuff, goes on with a roller - cleans up with water and it is non-toxic. I now have 3240 hours in it and my 5th anniversary of building was 2/19. Jake Jackson's slightly used instrument panel and instrutments are looking good!

I'm wiring and plumbing that at home on the cold days and nights after work. Lot of wires. Thats all for now and keep building gang.

C.J. Reinhart  
Fort Worth, Texas

## **The Race is on!**

### **For engines that is.....**

I was reading in one of the later issues of "Flying" magazine where I came across a little blurb on Vans Aircraft celebrating the completions and first flights of over 2000 RV aircraft. I later checked into to their web sight where they mentioned that they had sold over 7000 kits, which 800+ where the new RV-8's. Now this last part "hit me right in-between the eyes". Hmmmm.....Now add the Lancairs, Glasairs, Cozys, Falco's, etc. These aircraft use Lycomings 150/160 hp O-320's and 180/200 hp O360's. Those 800+ RV-8s are not all going to use the 200hp IO-360, but most of their testing was done with is engine combination and most people like power and like going fast!

Now the basic question is:

### **Where to hell are all these engines going to come from?**

It seems a lot of homebuilders (not just GP-4 builders) put off obtaining a powerplant until very late in the construction phase of the aircraft. Maybe it would be a good time to re-think these plans.

The aircraft salvage guys will be "Licking their Chops" with a big smile as engine demand soars along with the price. And you guys that already have their engines.... Well, your looking pretty smart.

Just food for thought.  
Spud Spornitz

## **GP-4 and Osprey Aircraft on the NET.**

There is a new GP-4 website. You can find it at  
<http://www.ospreyaircraft.com>

It's a great sight giving all the details on the GP-4 and the Osprey II. Also don't forget that George can be reached via E-mail at  
GP-4@juno.com

## **Some of the troops checking in.**

From: Thomas Evans

Hey Spud,

The club letter is getting better and better every issue!

I talked to Jackie Yoder a couple a months ago. He really enjoyed the picture (GP4BFN #20) from the Sun & Fun. (*Thinks it's a pickup was good*) We're planning to get together at Oshkosh. Hope your planning to be there...I like to meet you in person.

I am waiting for a new dual pickup distributor for the Buick 215 to finish up the engine (been wait on MSD to deliver nearly three months now). Plane is almost ready to go and I have rented a hanger at Bartow, FL (old air force base) and I can't wait to get it move over there. I received the new Ivo prop that was ordered at the Sun & Fun about a month ago....one of the blades had some minor damage from the shipping. (very poor job in packaging) They said that it could be repair to be good as new....we'll see about that....should be getting it back here next week.

I am going out to California next week on business...I plan to look up George and Jake while I am in Sacramento.

Tom Evans  
GP-4 49TE

Hi! Spud,

Your newsletters are great! Keep up the good work. I'm in the middle of constructing my work tables. I'm only making a 4'x16' table for the fuselage construction at this time . I want to leave some room for all of my power tools. I'm starting out in my garage using basically just half of it which is roughly 11'x24'. Waiting list for hangers near where I live are as much as 2-3 years. I've acquired a table saw, band saw, drill press, and assorted other tools. With a little luck I'll be able to buy the wood kit from Wicks Aircraft sometime this spring. For the time being I just look at the plans over and over, read the newsletters over and over, and dream about flying my GP-4.

I also want to take a ride in a GP-4. Most people might think I'm a little foolish spending money on plans having not flown one. I just couldn't wait. (You are not the only one! - Spud)

Sincerely,  
Steve Sokolich

## **Finally Starting!**

Hi Spud,  
I'm finally getting started on my GP-4 project! It's been a long road of planning, reviewing, postponing, etc., but I hope to have my workbenches built this month. I'm lucky enough to have a 2 car garage and a spare bedroom for my construction. I am building a 3' by 10' workbench in the spare bedroom to assemble the control surfaces, flaps, stabilizers, and any other small parts that will fit. My question is which of the recommended adhesives has the least offensive smell? Since some components will be built inside the house, I need to minimize any discomfort my 2 room-

mates might encounter. (After all, they're subsidizing my GP-4 but don't know it.)

Regards,  
Douglas Coeris

Hi Spud,

We have three of us local folks building GP-4s now (me, Dave McKeen, and Roland Lee). All three have would fuselages built (less covering), Dave and I have the tail feathers nearly done (again less covering) and Roland has the wing and tail feathers done but uncovered. I'm using Darry Capps for the metal work, Dave and Roland are busily welding.

You are providing a wonderful service. The recent issue on the construction of the fuel tank was especially good for clarifying some questions I had after studying the plans.

Thanks,  
Stu Fitrell.  
Hollywood, MD

### ***What is is it?***

Ok gang what kind of airplane is it? C.J. Reinhart sent in this photo so we could play "Stump the Band" with the group. I'll give a few facts (clues). This is a prototype, It was heading for certification, but was never flown and the photo was taken in May of 1995.

First person to get it right will get their next subscription for half price. You can write it on a post card or letter, call (913)764-5118 or E-mail me at [Bspornitz@aol.com](mailto:Bspornitz@aol.com) We'll let you know in the next issue. - Spud



## **GEORGE'S CORNER**



The three are as follows.

Fellow GP-4 builders:

The last two newsletters had articles regarding the manual gear retraction problems. I hope I can shed some light on probable cause and how to eliminate these problems.

### **Re: Bill Berrick article:**

I was surprised and sorry to read that Bill lacked the confidence to brake hard on a short field landing for fear of a gear failure. I have photos of Bill's GP-4 under construction and I must say they show a very professional quality that should provide a safe condition for most any reasonable landing condition. I have since written to Bill outlining three adjustments he could make that would lock the gear down tight and secure the link assembly for any reasonable side loads he may encounter.

1. Check your wheel alignment. If you have some play from toe in to toe out, washer your scissors for a slight toe out condition. (See drawing 34)

2. Increase the spring tension on the strut to the retracting link. Perhaps a stronger spring or a longer spring stretched further. The spring does assist the retraction cycle once the link passes over center.

3. Since the air driven up-locks pull the main gear into the wheel wells, about 5/8" to 3/4", this allows you to lengthen the main gear push rods for a very positive down load to lock the retraction links solid in the gear down position.

Re: Ernie Holms article:

It was a pleasure to see Ernie's very nice GP-4 on the cover but sorry to learn of his gear problem. The bent retraction link stud has been upgraded to a 3/8" diameter from the early plans 5/8" diameter stud. I didn't get a chance to help Ernie with his manual problems as he had already decided to retro fit the hydraulic gear in his GP-4 with the help of Pat Salamonde's retro fit drawings.

Let's analyze the manual system:

It is extremely important when bolting the main gear trunion and the retract link assembly, (Drawing #36), to the spar face in order to align them exactly in the same plane. (82 degrees to the spar face). They must be in the same vertical plane as well. A misalignment will cause a bending load on the rod end stud, (drawing #33 marked A), in the retraction cycle.

Please note:

On early issued plans, this stud was made from an AN-5 bolt and the tube receptacle was a 7/16" X .065 tube reamed to 5/16" ID (See drawing #33 marked A). This has since been upgraded to a AN-6 stud and the tube receptacle is 1/2" X .065 reamed to 3/8" ID. The stud must be a tight fit into the receptacle. The

rod end bearing on the end of the link must also be changed from the HF-5 to a HF-6.

When adjusting the push rods it is very important to have some pre-load on the main gear push rods to insure a tight link at the bridge top edge. (See drawing #35). It says to hit the link a sharp blow with the palm of your hand and the link should not yield. This should be done, wheel off the ground with the airplane on jacks. If the link tends to yield, lengthen the main gear push rod, rod end bearing about one turn and check it again.

Wheel alignment:

There is always a bit of play in the telescoping main gear studs that allows the wheel to mis-align slightly. Most of the play can be eliminated with good, reamed fits in the scissors assembly, (See drawing #34). You should washer the scissors adjustment with just a slight toe out. When the wheel or tire hits the runway or when braking is applied, the wheel ends up parallel with the center line of the fuselage. You can check this by forcing the wheel to a toe in position by twisting the tire and re check the alignment.

My testimonial:

Between Darry Capps and myself, we must have about 1,000 or more hours on our GP-4s. Both have the manual system with air driven up locks. This part of the manual system has been pretty much trouble free. I might add that Darry is a fine machinist and his metal work is excellent, which no doubt contributes to his trouble free gear system.

We have both landed our GP-4s in some hellish cross winds which induces severe side loads. Your manual system will also be trouble free if your metal work is up to standard and you adjust your linkage correctly. If your metal work is a little weak, I strongly suggest you let Darry fabricate the landing gear assembly for you.

Regards to all,

George



# 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 Fax (916)978-9813 E-mail [GP-4@juno.com](mailto:GP-4@juno.com)

**For Sale:** Pre-fabricated composite components for GP-4. Cowling , exhaust blisters, inlet ramps, tailcone . Complete four-piece package. Call or E-mail for current pricing. Shipment will be sent "Freight Collect" - Jake Jackson - Rio Linda, CA (916) 992-0608 E-mail [J7200@aol.com](mailto:J7200@aol.com)

**For Sale:** Now flying Ultralite due to loss of medical. GP-4 project now for sale. Gear in wing. Tanks ready to mount. Tail group enclosed. Ailerons and flaps mounted but not covered. Call and make me offer. (423) 396-2917 Rich Nadig, Ooletewah, TN

**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

**Back Issues:** We have all of the GP-4 back issues (#1 thru #23) 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

**Wanted:** An original video (not a copy!) that George Pereira made on the GP-4. I have a multi-copied video now, but is very poor. Will gladly pay a reasonable price. Contact: Spud Spornitz (913) 764-5118 or 1112 East Layton Drive, Olathe, Kansas 66061

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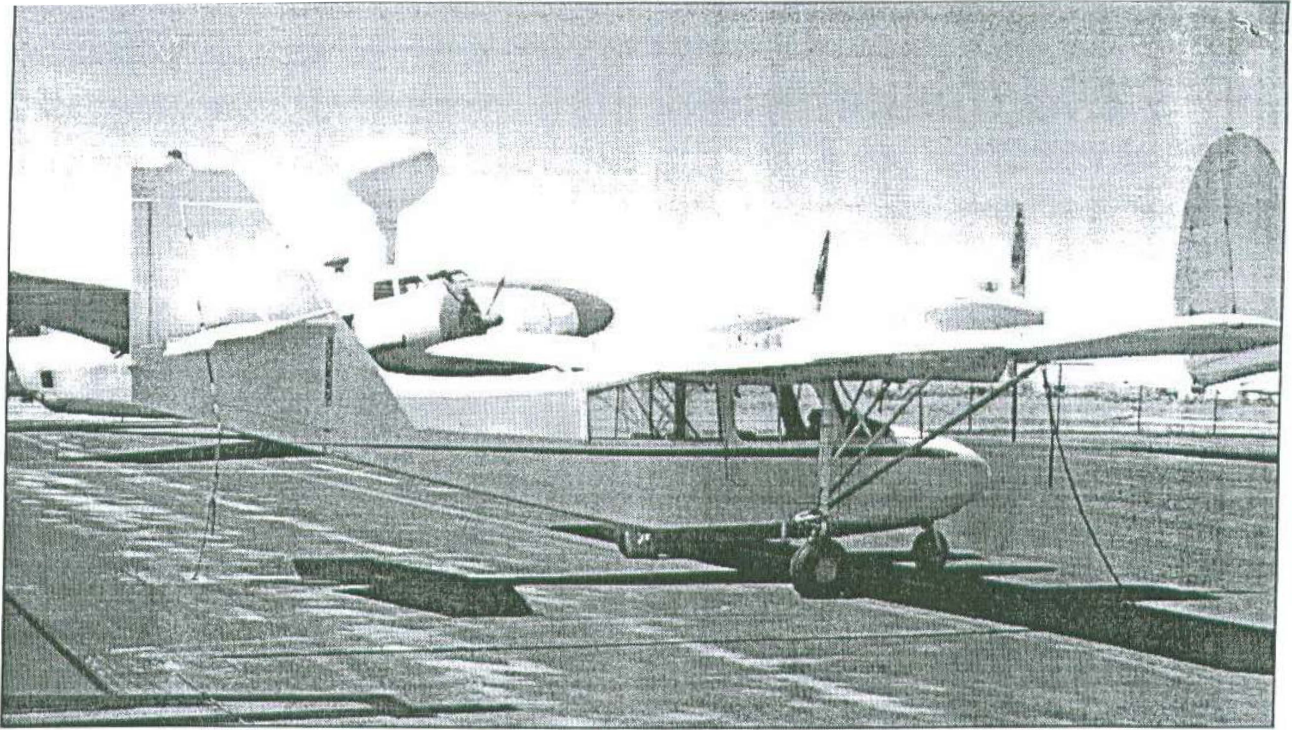
George Pereira

Phone (916) 483-3004

Fax (916) 978-9813

E-mail [GP-4@juno.com](mailto:GP-4@juno.com)





***What is it?*** See page 3



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