

FAZMANY NEWSLETTER
NUMBER 73
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AS YOU CAN SEE, it's time for me to get the summer issue of the PL Newsletter out, since it is now Nov. first as I write this. Seems that no matter what season it is, there are things which get between me and getting the newsletter out. This time around I've been so busy working on N75PL when I wasn't working for EAA, that very little time was left for anything else. It all started way back late last winter, when I got tired of the marginal brakes and having brakes for only the left seat pilot. I thought the best way to go would be to take an existing assembly, such as a Cessna 150 system, and modify it to go in the PL. Well, easier said than done. It is possible; N75PL is proof of that. But it sure isn't easy.

Even so, I would have completed the project in time for vacation in October if it hadn't been for a rather hectic and erratic work schedule. As it turned out, I just missed getting N75PL through its annual by vacation time, so it stayed in the hangar while Anne and I were forced to turn to a much more hazardous and unreliable form of transportation - the airlines. For those of you who might think that the PL-1/-2 cockpit is a tight fit, well, just try the center seats in the coach class section of an L-1011. I'll take our PL anytime over that. And besides, all the seats in our PL are window seats with a great view, and all are in the non-smoking section, too!

Oh, well, next year. Meanwhile, I've accomplished a lot of things I've been wanting to do with our PL for quite some time now, and I'll throw in some sketches of the new rudder pedal/brake assembly toward the back of the newsletter just in case any of you might be feeling masochistic enough to want to try this. If you still have any doubts about this project, let's put it this way: If I had it to do over again, I'd go with working on improving the brake action on the old system somehow and installing another set of master cylinders and shuttle valves for the right side rather than installing a whole new system.

Along with my crude sketches, I'll also be including the last of the pictures I have of Bob Bradley's project - see the past few issues for the others. And of course the usual assortment of notes from others, things to sell, things to buy, etc., etc., etc. By the way, one thing you will not be seeing in this newsletter is a report on the '85 EAA Convention - mainly because, even though I work for the organization, I was in the Museum practically the whole time. I only got out on to the Convention grounds for about two hours one afternoon. So I'll leave it up to Sport Aviation and some of the other aviation magazines to cover all the goings on out there. Even though I don't know much about the goings on out on the field, I do know that this was the biggest convention ever, in terms of the number of visitors. The museum is now two years old, and this was the

Dear Pat-

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Hope this finds you in good health and getting back to the normal work routine. I haven't yet contacted Mildred Arnold about her late husband's PL and battery relocation, but I should have more time in the next 2 weeks or so - and enough information for another newsletter in another month or two! - Regards - Jack M.

third Convention for which it was open. Generally, we have been setting annual attendance records for each hour, day, and week, every convention. Well, this year attendance actually dropped off for the first weekend in the Museum - but the only reason was that the vehicle traffic was so thick that it was practically at a standstill all day long on Saturday and Sunday! In other words, a good many of those who wanted to visit the Museum just couldn't because they were stuck in traffic. We finally set a new one day attendance record on Monday, when the traffic for the Convention thinned out enough for people to get into the Museum!

Obviously, the reason for all this hullabaloo was the Concorde, which made its first ever appearance in the midwest USA. One wouldn't think that an aircraft so obviously inferior in terms of fuel consumption, short field performance, and maintenance and operational costs to the PL would draw so much attention, but it just goes to show that showmanship can often win out over a superior product like the PL-1 and -2. Right?!

As I said above, I would not insert a report on the EAA Convention in this newsletter. Well, I didn't intend to, anyway. But now you know about as much as I do about the Convention. In fact, I don't even know how many PLs of various types attended. I know there was one in close proximity which didn't make it due to having no steering or brakes. Poor N75PL had to spend the convention in the hangar. Before I go on to other subjects, do any of you out there who have brought your own aircraft to the Convention have any feel for the general level of consideration by the spectators? What I'm getting at is that in '84, the last year we had our PL on display, I found some slight evidence of prying fingers at a couple of points on the aircraft when I went to taxi back to its usual home on Wittman Field. No big thing - someone had, for some reason, marked one of the freshly painted tip tanks with a ball point pen, and someone had opened one of the hatches over the fuel cap on one tank. God knows what else had been done and gone undetected. Anyway, this sort of thing worries me, and I don't really know what can be done about it, short of posting a guard at each aircraft. Theoretically, only EAA members or their families and guests can wander among the display aircraft themselves, but I'm sure you're all aware that a good many visitors buy an EAA membership at Convention each year just for the "pit pass" privileges, so they can get out amongst the aircraft and get closer to the air show line; they don't give a damn about the other aspects of EAA membership or the responsibilities that go along with it. These are not the sort of people I care to have close to my airplane, but on the other hand, many of these people are a prime source of new blood for EAA, so to speak, and many of these people go on to become aircraft builders and Convention volunteers in the future. I don't want to "shut the door" so to speak on those who are genuinely interested in the sport and hobby, and who appreciate the time, money, blood, sweat, and tears that go into any aircraft project. On the other hand, I'm not interested in the only casually interested visitor subjecting our pride and joy to the onslaught of his inconsideration. I don't think the problem has reached epidemic proportions - yet. However, in the future I will seriously consider whether or not I want to take a chance on

damage to our PL by displaying it during the EAA Convention. I'm certainly not suggesting that you keep your airplanes at home; after all, flying your pride and joy and showing it off to others is a good lot of the reason for going through all that work in the first place, right? But I am interested in some input from any of you out there who have any thoughts on this matter - have any of you brought your airplane to Convention and at some time or another wandered by to find some kid standing on the tip tank while daddy takes a picture? Do any of you have any thoughts as to how to prevent this? (bear in mind that murder is a very serious offense in the state of Wisconsin.) Please let me know if you have any thoughts on this.

Even though I didn't get outside much during the Convention, I'm sure some of you managed to make it out to OSH for the big show. Right off hand, the only newsletter subscriber I know of who came through the Museum was Cecil Mick of Paducah, KY. Glad you could make it, Cecil; hope to see you next year and that we might have some time to talk about PLs. If any of you others came through the Museum, I missed you - but give it a shot next year. I'll be there.

On a more serious note, one of my correspondents informs me that our favorite aircraft designer, Ladislao Pazmany, suffered a heart attack shortly after Convention (Aug. 10) and underwent coronary bypass surgery. I just called Paz to confirm all this and to wish him a speedy recovery, and he tells me that as of tomorrow (Nov. 4, as I write this) he will be returning to full time work again. There is of course no good time for such an illness to strike, but it is indeed fortunate that modern medicine has made such great strides in the last several years. Now at least such surgery is almost routine, so I will take this opportunity to again wish Paz a full and speedy recovery. Just don't let them push you too hard at work, Paz!

INPUT & FEEDBACK DEPT: Several of you have sent me sufficient correspondence since the last newsletter (and in a few cases even before that), which needs notice/comment/publication/whatever in this newsletter. For example, many moon ago our esteemed previous newsletter editor, Dave Panton, sent me a progress report on a couple of PL builders/ flyers out there who are not current subscribers. Will Guellackson of British Columbia was about 90% complete with the structure of his PL-2 as of about a year ago. He has just about everything needed to complete the project, including a Lycoming O-320. At the time, he felt he would have it flying by late this year - in other words, we may have another PL-2 flying by now!

Roger Maheux of Quebec is the current owner of a PL-1 originally built around 1967 - 68 by Joe Collins of Ontario. The aircraft currently has about 1500 hours on the airframe and is adding another 150 hours a year average to that! Nevertheless, Roger will have to go some to beat the flight time on some of the PL-1Bs from Taiwan. He asked Dave how long a PL will last - fear not, if they are built properly I have no doubt they will outlast the pilot if properly flown and maintained, no matter how much time is put on the airframe. The engine is another matter, however - this aircraft (C-FJJC, by the way) originally had a Lyc O-290 GPU and as Dave put it, this engine was "apparently very

unreliable." I would say that ranks as the greatest understatement of this newsletter, with three failures on that engine! The current engine is a Lyc O-320 with fixed pitch prop. Roger had a constant speed on the O-320 for a while, but the longer blades were picking up too many nicks during taxi.

Dave's own PL-2, C-6GUK now has 835 hours on it, and he reports that all it needs is a belly wash. Can't beat that for low maintenance.

Richard Chandler from way down under in Australia notes that his PL-2, serial # 250, is coming along, but as with many of us, (tell me about it!) other volunteer work seems to slow down the work schedule. Richard was Technical Director of the State Division of the Sport Aviation Association of Australia until recently, and still holds the post of Chairman of the Federal Technical Board of SAAA. Richard notes that Australia has somewhat more stringent standards for the use of autogas in aircraft than does the USA - a very extensive flight test program with temp. and pressure surveys and 100 hour "endurance" test in regular operation. It looks as though most of the standard aircraft approved by the US FAA for autogas use under the EAA's STC will also eventually receive Australian approval. However, I'm sure they still have some additional red tape up their sleeves for us homebuilders who want to do the same thing, right?

Wyn Miller of Camarillo, CA sent me a nice letter way back about 6 months ago about his PL-1, serial number one. Wyn has removed the original C-90 engine, which had 1598 TT and 100 STOH - says it's still perfectly sound, but as with many of us, desired more power and has upgraded to a Lyc O-320. This necessitated a new mount and also a new firewall - a very major modification. Fortunately for those of us with the smaller Lycomings already installed, very little in the way of modifications are required to move up to an O-320. Wyn also modified the aircraft by moving the seat back crossmember back somewhat further in order to get more leg room for taller pilots; at 5'6" (wife Anne is 5'7") we have not found this to be necessary on our own aircraft, fortunately. In fact, as the aircraft was originally equipped, it seemed to me that anyone up to 6' would have been comfortable - but ours is not the same as the original PL-1, either. We have installed seats from a Grummerman AA-1 in N75PL, and find that they fit us just fine, thank you - but a taller person definitely finds it cramped with the seats installed. But since this nice letter, Wyn contacted me again on the matter of his PL-1, which now brings me to another dept. of this newsletter - the -

CLASSIFIEDS

AS NOTED ABOVE, Wyn is interested in selling the old Continental 90 and prop from his serial #1 PL-1, N40B1K. In addition, Wyn has decided that the aircraft just does not fit him at all and it is up for sale. The aircraft is fully IFR equipped (in fact was flown almost daily IFR in the Los Angeles basin for years by its original owner) and as noted above, now has a Lyc O-320 E2D - but no prop. Wyn also wanted additional fuel for the airplane, and had some tanks made up to be installed in the

wingtips, 8 gallons each. These tanks were to be enclosed in the existing wing skins, just inboard of the standard tip tanks. However, these tanks have not yet been installed, as I recall Wyn explaining it to me. Yes, I already asked about purchase of the aux. tanks separately, but he wouldn't sell - they go with the aircraft. Wyn may very well be contacting you on this himself, but if you want further info on any of this, write or call Wyn Miller, 927 Paseo #658, Camarillo, CA 93010. Phone 805-484-4411.

This next paragraph is sort of news and sort of advertising. Many of you are probably wondering about reports of Taiwanese PL-1Bs in southern Calif. Lee Conlan of Homebuilders Aircraft Associates sent me some info on this. Lee says that (as of his letter of June 17) 30 of these aircraft are available, but as of his letter only one had been assembled and the restrictions flown off; four are still in the shipping crates. Asking price on these aircraft is \$7000 assembled with restrictions flown off, or \$6000 still in the crate. All of these aircraft have Lyc O-320s with 400 - 700 hours time. For more info, contact Vista Aviation, 12653 Osborne St., Whiteman Airport, Pacoima, CA 91331. Please give Lee Conlan of HAA a mention when you contact Vista about these aircraft. By the way, there's a short article in the May '69 issue of Sport Aviation, pp. 26-28, which will give you a little more background on how the PL-1B came to be built in Taiwan. There are also some interesting black & white pictures of the aircraft in its Taiwanese markings.

The mystery about these aircraft deepens when one considers further info in the letter from Wyn Miller. Wyn indicated that he had talked to a man who supposedly owned the only PL-1B flying in the USA; this would have been a year or more ago. According to Wyn, the owner had had a very trying 2 to 3 years of going round and round with the FAA in trying to get the aircraft certificated as Experimental - Exhibition. This person (name unknown) was apparently pretty well fed up with the hassles, even though he pretty much had conquered all the red tape by that point. However, another of our newsletter subscribers, Jack Tetrick of 1785 Doolittle Court, Daytona Beach, FL 32014 is the proud owner of a PL-1B (N830JT) and is very happy with it. In fact, this is as good a time as any to go into his report on his aircraft. One big difference between the typical PL-1/-2 is the weight: Jack's airplane weighs 1035 lbs. empty! Gross is 1540. These weights are almost exactly 200 lbs. (empty) and 100 lbs. (gross) over N75PL's weights, to give you some idea - and the O-320 is nowhere near all of that. The engine difference would come to only about an additional 20 lbs! Apparently, as Jack T. says, the -1Bs are "built like a tank." But actually, Jack T. says he hasn't had much chance to fly N830JT as of late, since he is so busy instructing out of Spruce Creek Airport. He is extremely enthusiastic about this spot, and I must admit he makes it sound like paradise for a pilot, with as interesting a mix of aircraft as you're likely to see on any one airport outside of DSH during the EAA Convention. If such a spot interests you, contact Jack Tetrick at the above address or give him a call - 904-788-0679. Spruce Creek also advertises in AOPA Pilot so you may have spotted one of their ads there also. I must admit that about this time of year, tropical paradise with airplanes sounds

pretty tempting to someone in Wisconsin.

Pete Karmouche has adjusted the prices on his PL-1 / -2 wheel/gear fairing kits to make them a bit more affordable for us, mainly by offering the kits in several stages of more - or - less completion. Pete also has a completed kit, ready to ship, with no current customer. If you would like to be that customer, Pete is willing to knock 10% off the standard \$1375. or in other words the price is now \$1237.50 plus \$25 crating, equals \$1262.50. If you want to do more of the work yourself, the prices go down accordingly - see the parts/price list on the last page of this newsletter. I must admit that the thought of wheel fairings is getting much more tempting with the price reduction; now if I could just convince my wife...c'mon, guys, you all have to put up with this too, if you're married!

And I have a **Genave Alpha-200B Nav-Com** for sale. This radio is currently installed in N75PL and works fine; I'll be installing another com (Narco Com-11B), transponder, and VOR/ILS system in the airplane, so the old VFR only radio has to go. It's a good little unit for VFR, but with a shared receiver it is incapable of receiving comm frequencies and nav frequencies at the same time. \$395 will buy it with yellow tag, shipping, and insurance. If you want to save a little more, I'll knock off \$40 if you want to forego the yellow tag and take my word for it that it works - take your pick. Mounting tray is also included. Contact your newsletter editor at the address/phone at the top right of the first page.

QUESTION & ANSWER DEPT: My faithful readers might recall a while back when **Walter Butler** was asking about rivets and **Frank Cuichetto** was asking about flap handles. Well, **Tommy Phelps** of Ft. Worth, TX came up with some answers for you. Tommy says that the CR-756 and CR-757 Cherry rivets needed are available at Standard Parts & Equipment Corp., Box 4600, Fort Worth, TX 76106. Hope you need a whole bunch, since they sell in minimum quantities of 100. No, I don't have a price - as Tommy said, "the salesman would not identify himself, so good luck!"

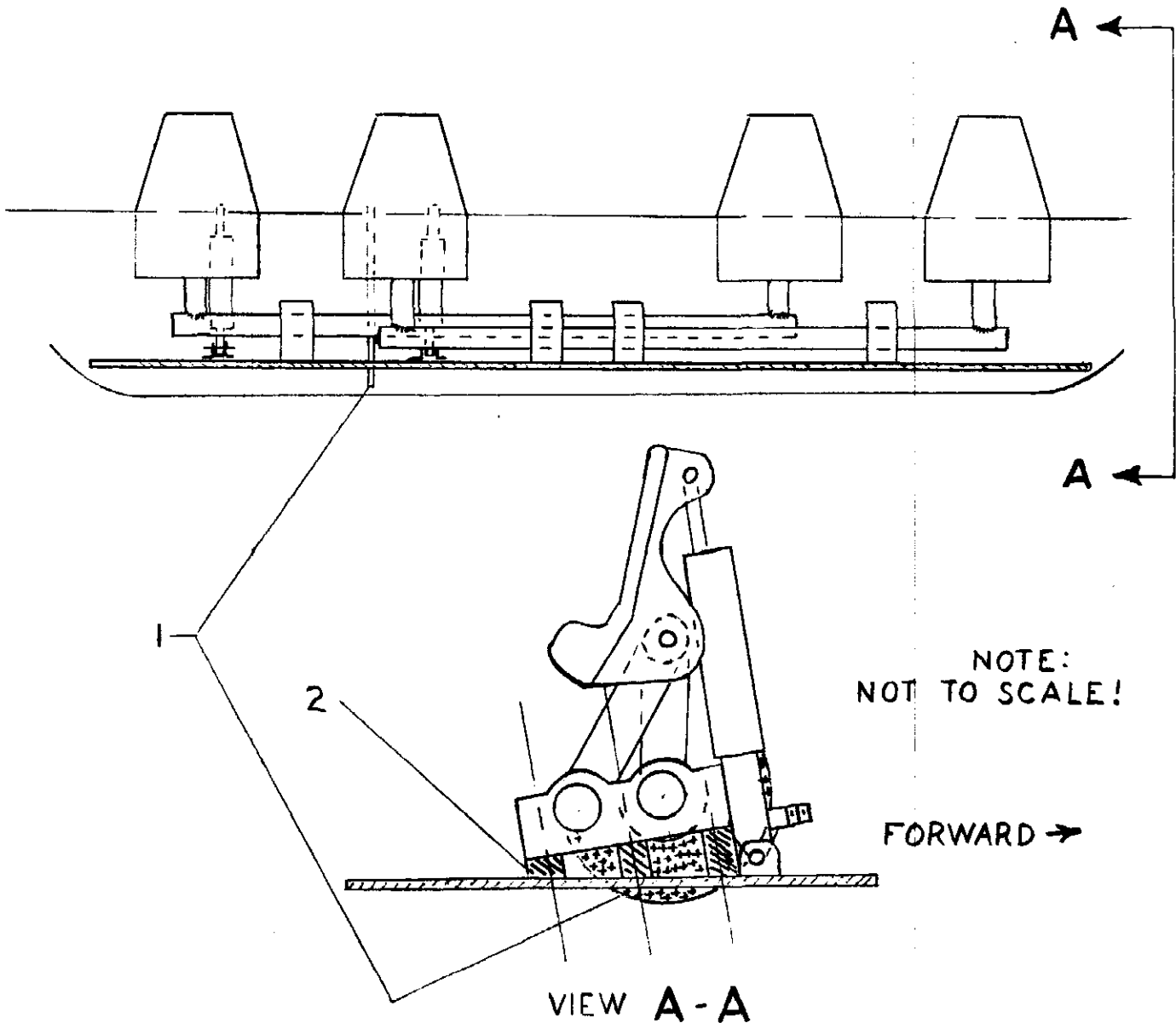
For Frank, Tommy says, "my first effort to form the flap handle yielded not only a cracked tube but also a broken vise by using a twelve inch cheater. Next, we sandwiched a tube between two pieces of heavy steel approx. an inch thick, and using C clamps as a vise we repeatedly heated the tube cherry red and tightened the clamps. We used a piece of metal inside the tube to prevent over forming." Thanks for the help, Tommy; that's one of the things this newsletter is supposed to be for, and I don't have all the answers myself.

Now, maybe some of you can help out Tommy - he's looking for a piece of 1095 spring steel, annealed, to make part 2-40-006-49. Dimensions are 0.6"x1.0"x.016". Anybody got some? Contact Tommy Phelps, 1200 Hamstead, Ft. Worth, TX 76115.

Duane Seymour needs detail drawings of the cabin heat system. After perusing my plans, I concluded that by golly, there

is no cabin heat system shown - at least, not at a casual glance. The (excellent) system in my airplane does not show up on any drawings I have - anybody have some help for Duane ? Contact Duane Seymour, 210 Rue Grand, Lake St. Louis, MO 63166.

And now, the part you've all been waiting for, I'm sure: Here's the word on how to install Cessna 150 rudder pedals & brakes in your PL. I realize that the info is a bit sketchy (pun intended) but with the sketches and some textual information, this may give you a bit of an idea as to what's involved. I attempted some Polaroids, but the lighting just wasn't sufficient for them to be reproduceable; you'll have to live with my sketches.



1. This is the carrythrough system to connect the brake action of the two right rudder pedals together for right brake. On the Cessnas, there is plenty of clearance between the floorboards and

the belly skin; not so on the PL. This necessitated a slot in the floorboards and also raising the blocks which support the rudder pedal torque tubes. See note 2, below.

2. In order to raise the pedal assembly sufficiently to keep the brake carrythrough arm from hitting the inside of the belly skin, it was necessary to raise the whole assembly. I found some very hard rubber cylinders approx. 1" long x 1" dia., apparently used for tips on chair and table legs. By cutting these to the appropriate lengths I was able to raise the torque tube mounting blocks to the correct height and angle. Note in view A-A that the forwardmost torque tube is higher than the rear tube, due to the angle at which the mounting blocks are installed. This was necessary to conform to the original installation; the assembly is mounted much like this in the Cessna, and trying to mount it directly on the flat floor of the PL-2 created interference between the forward tube and the brake carrythrough assembly which passes around it. This of course meant that the nutplates had to be mounted at an angle under the new floorboards so the bolts would align properly with them.

Also, the new floorboards were fabricated from .062" 2024 aluminum rather than the mahogany plywood called out on the plans. When going through the initial disassembly, I found that the material originally used was only 1/8" rather than the 1/4" called out in the plans - no wonder it didn't seem to hold up well. With all due respects, Paz, I think metal is a better material in this location in the real world. There's nothing wrong with wood so long as it stays clean and dry, but inevitably there will be at least a little water in this area from time to time, and the real killers of a wood floor in this area are the ever present leaks from brake master cylinders and fuel selector and distributor. In the theoretically perfect airplane these never leak, but in the real world it's another story. I've cured all these problems for the present, but I have no doubt that in years to come there will be some seepage from these areas - and fuel and brake fluid are no good at all for wood.

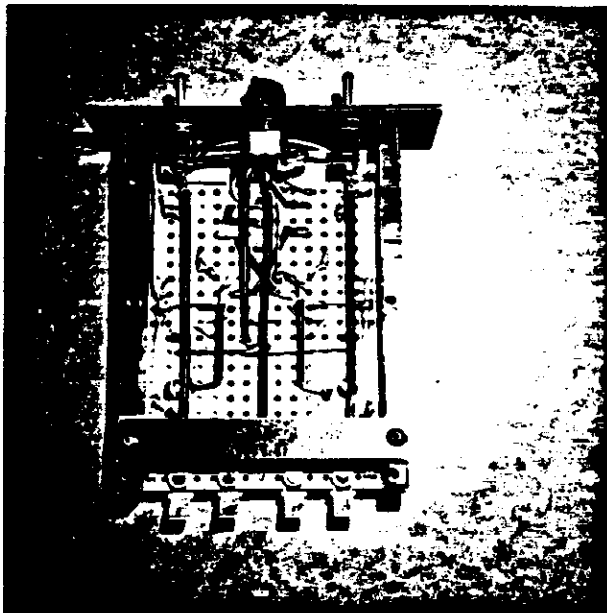
By the way, you may be wondering about weight. Well, the Cessna assembly came out within two or three ounces of the old assembly; this is a good way to go if you don't mind all this work, since the Cessna assembly has only two master cylinders (for left and right wheels) rather than four and a shuttle valve as some other assemblies use. Less weight and less complexity are always nice. The Cessna system ties the brake action together with a tube - within - a - tube system; the braking action from say, the left brake pedal for the left pilot position is connected to the left brake pedal for the right pilot position via a smaller torque tube inside the main torque tube. This makes for a lot lighter system than four master cylinders, shuttle valve, and additional hoses - not to mention fewer leaks this way. The aluminum floorboards are almost exactly a pound heavier than the old wood boards - but keep in mind that on my airplane the original builder used material of only half the thickness called for on the plans. If you go with .062" aluminum rather than 1/4" plywood, the difference in weight should be negligible - and you can eliminate the aluminum scuff plates needed for the wood floor this way.

There are a few other minor differences, such as the method of connecting nosewheel and rudder cables. The Cessna 150 has a relatively deep belly, as mentioned before. This allows all the cables to run down the center of the belly under the floorboards, and the rudder pedal torque tubes have arms welded to them to connect with the cables. Rather than cutting holes in the belly skin of my PL-2 to allow a few now useless arms to stick out into the breeze by a few inches, I cut them off. But now we have to find a way to connect this assembly to the cables in the PL-2, which as you know run at ankle level along the extreme sides of the cockpit interior. Well, this is where I ran out of time just before that vacation; the idea I originally had for this didn't work out. Now I am planning on using the axis where the rudder pedals are mounted (this is currently a 5/16" aluminum tube) and replacing it with an AN-5 bolt in the extreme left and right pedals. I still need to come up with a weldment to help support this bolt where it will attach to the cables, and a method of connecting all this. Read all about it in the next newsletter.

And now, if I planned all this right, we'll have just enough room for the last of Bob Bradley's pictures of his project. As you may know from previous issues, Bob is installing a good many modifications in his PL-2, including (bottom of this page) a homebuilt electronic fuel sequencing control. Bob has installed extra tankage in his PL, and as I recall from his letter he came up with this device to help keep the relatively large fuel load better balanced.

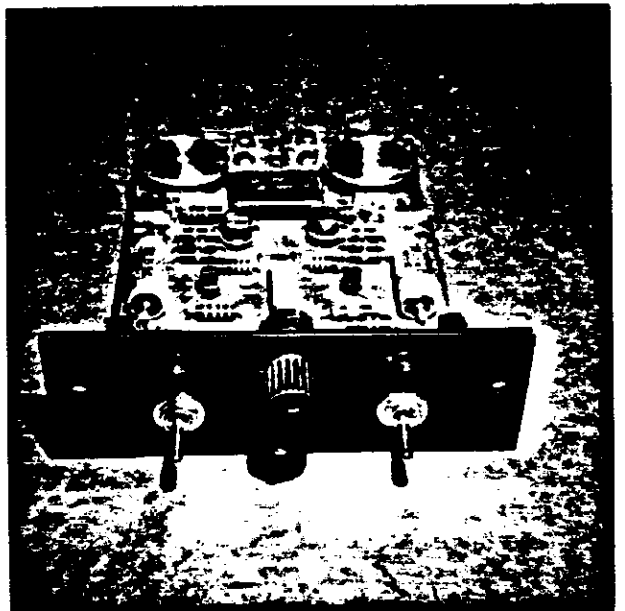
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TOP PICTURES



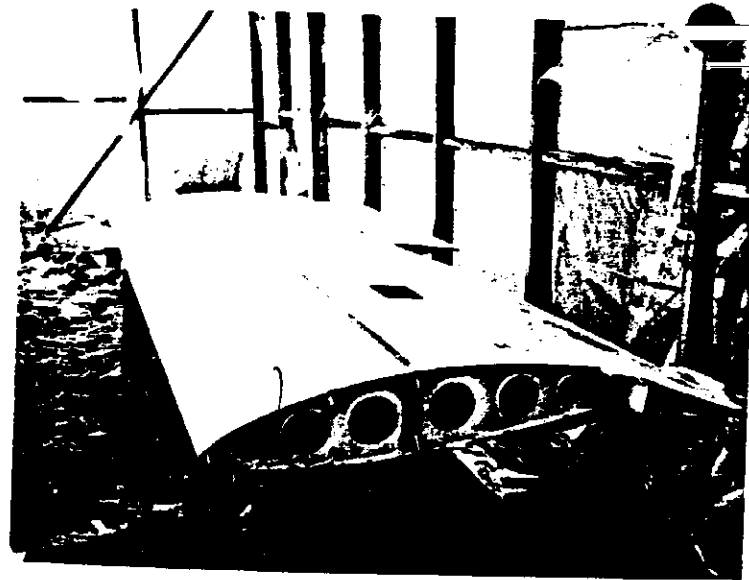
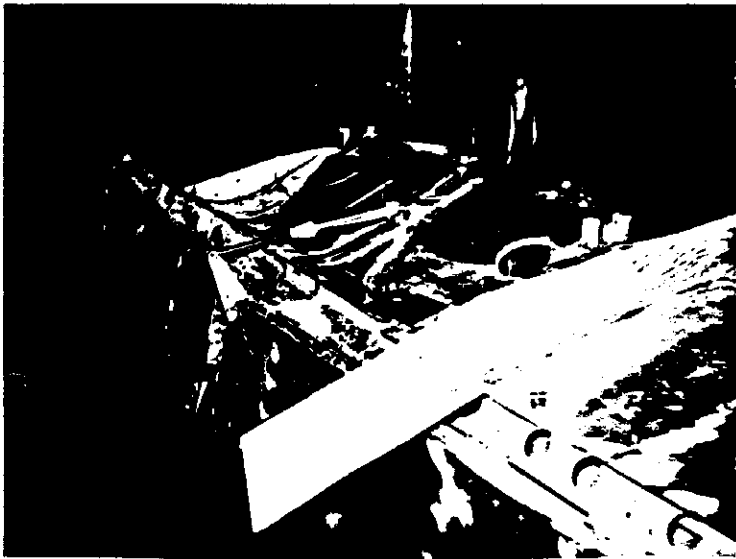
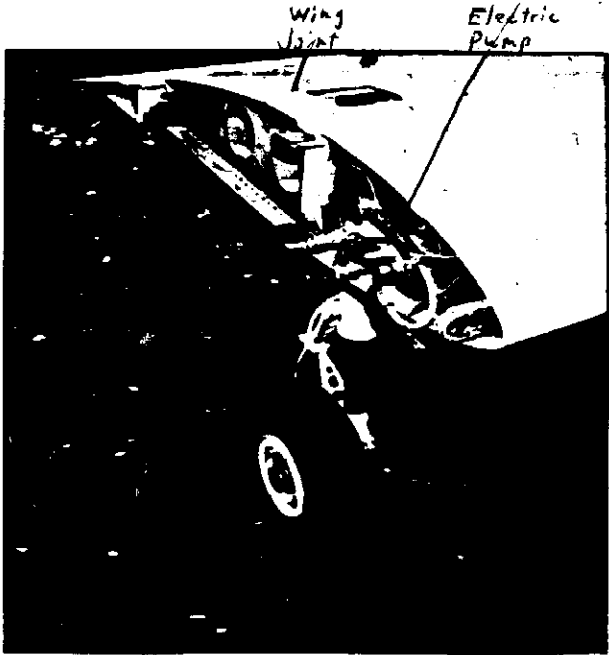
Bottom

FUEL SEQUENCING CONTROL



TOP

These shots are of Bob's wing detach system and hydraulic flap mechanism. Also note the electric pump for fuel transfer at the outboard end of the wing center section, near the main gear attach point. Bob, I believe that between you and some of the other PL builders currently working on their projects, we're going to see at least a couple PL-2 Grand Champions at Oshkosh in the next few years - just make sure you guys don't bring your brand new airplanes out here for judging the same year!



Well, that about wraps up the summer issue - just in time for the "down under" summer, anyway. Next time around I'll continue the saga of the C-150 installation in N75PL, and I have a late breaking news bulletin that Pete Karmouche will be sending some pictures of his project. All this and (hopefully) more, in the fall issue, due out sometime this winter. See you then!

**PAZMANY PL-2
WHEEL AND STRUT FAIRINGS
CUSTOM FABRICATED**

EXCLUSIVELY
FOR THE PL-1 & PL-2 AIRCRAFT
by

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**PAZMANY LANDING GEAR WHEEL AND STRUT FAIRINGS
PARTS AND PRICE LIST EFFECTIVE AUGUST 1, 1985**

Custom built by: Pete Karmouche, 9 Cranfield Avenue, San Carlos, CA 94070, Phone: 415-591-8429

	Kit #1	Kit #2	Kit #3	Kit #4	Kit #5
	Fiberglass parts untrimmed, unassembled with no hardware.	Fiberglass parts untrimmed, unassembled with hardware & pre-fabricated & welded attachments ready to install.	Fiberglass parts trimmed, assembled with no hardware.	Fiberglass parts trimmed, assembled with hardware and pre-fabricated & welded attachments ready to install.	Fiberglass fairings for all 3 wheels complete with installed hardware & attachments & ready to install onto the aircraft. No work required by the builder/owner except for painting and ultimate installation onto the landing gear & wing.
	\$175.00	\$200.00	\$ 245.00	\$ 270.00	\$ 325.00
NOSE WHEEL FAIRING					
- 7 Fairing					
- 9 Fairing					
- 11 Bulkhead					
- 13 Bulkhead					
- 15 Bulkhead					
- 17 Bulkhead					
Six parts total					
MAIN WHEELS AND STRUT FAIRINGS					
- 19 Front Fairing (2 supplied)					
- 21 Rear Fairing (2 supplied)					
- 23 Bulkhead (2 supplied)					
- 25 Bulkhead (2 supplied)					
- 27 Fairing (2 supplied)					
- 29 Fairing (2 supplied)					
- 31 Angle (4 supplied)					
- 33 Rib (2 supplied)					
- 35 Rib (2 supplied)					
LEFT MAIN - 10 parts total	275.00	335.00	395.00	455.00	525.00
RIGHT MAIN - 10 parts total	275.00	335.00	395.00	455.00	525.00
TOTAL, ALL 3 FAIRINGS	725.00	870.00	1035.00	1180.00	1375.00
TOTAL, CRATING CHARGE	25.00	25.00	25.00	25.00	25.00
GRAND TOTAL	\$750.00	\$895.00	\$1060.00	\$1205.00	\$1400.00

All order will be shipped C.O.D. for freight charges. Please remit the appropriate amount when ordering. Checks will be cashed only when work is actually started on your kit. Please allow 6 to 12 weeks depending on the kit ordered. Thank you, Pete.

Jack & Anne McCombs
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Your last issue is #N/A