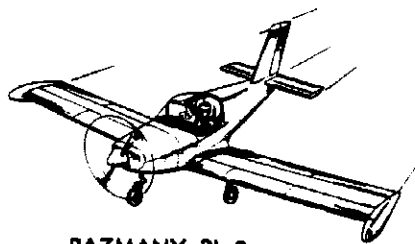


PAZMANY NEWSLETTER  
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Aircraft Designer:  
Ladislao Pazmany  
PO Box 80051  
San Diego, CA 92138



PAZMANY PL-2

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**HAPPY NEW YEAR!** It's a little late for me to wish all of you a merry Christmas, but please let me be the first to wish you a merry Christmas for '86. I'm slowly getting caught up on my promised newsletter schedule (this newsletter being started only ten days after the end of the fall season!), thanks primarily to Pete Karmouche, who sent me a whole stack of pictures of his famous PL wheel and strut fairings in various stages of completion. This is what you'll be seeing on subsequent pages.

Other than Pete's pictures, I have had exactly two letters and a phone call since the last newsletter was sent out, and I confess I haven't done a thing on N75PL to write about. In other words, these newsletters are going to start getting a lot shorter if I don't get some input! Come on, guys (and gals) - you must have some things to tell your fellow builders and pilots out there! Being as how I won't have that much text in this newsletter, this seems a good place to recap a few things which some new subscribers have asked about.

**SUBSCRIPTION RATES:** This seems to confuse a lot of people, since it's on a per issue basis rather than per year, as with real magazines and newsletters. The reason for this is that as much as I will try to get the newsletter out on a regular basis, I make no promises - and it's not fair for me to charge you for say, four newsletters a year, and then only publish two or three. This way, if you send in say, \$10, I guarantee you ten issues (if you live in North America, that is) - but I won't say how long it will take me to get them to you. For those of you endeavoring to give the PL series an international reputation, rates are \$1.50 per issue, due to postage costs being four times higher for first class postage outside the North American continent. Also, please send U.S. funds. If I have to make a special trip to the bank to convert your rubles or whatever, I'll take it out of your subscription funds.

**BACK ISSUES:** Almost all back issues are available now, with the exception of numbers 2, 7, and 8. If any of you have these issues I'd appreciate a copy - either send me a copy, or the original you have and I'll copy it and send it back. I'll add one issue to your subscription for each back issue of # 2, 7, or 8 that you can send me. I don't expect to get any takers on this, since apparently all you subscribers have sent me all the back issues you have available already. But just in case you missed the three I still need, send 'em in.

All other back issues are available from me. Actually there are a couple of exceptions I should make clear here: First, if you order all of the issues I have, you'll find two #4 issues. This occurred way back in '66. apparently Paz (am I right on this?) turned out some newsletters primarily to get plans change notices out to builders, and inadvertently labeled two of these

as #4; the publication dates are March and Sept. of 1966, by the way. For my records, they're labeled #4 and #4-A, respectively. And by the way, there also seems to be some confusion (at least on my part!) as to exactly when the newsletter started. From newsletter #3, dated Nov. 1965, they seem to be in chronological order - but #1 is dated August 1966. Did somebody make a slip of the typewriter key when writing it up? Or were there two newsletters being published more or less simultaneously by Paz and someone else? I suspect the former, and that we have had a more or less continuous newsletter now for over 20 years! Had I realized that, I would have commented on our 20th anniversary at the time. Anyway, a belated happy 20th anniversary to the newsletter and my thanks go out to all those previous editors who did such great work to get the newsletter this far - and to all of you who have contributed to help me keep it going.

You will also find another gap in the order when you get to # 56 - there ain't none. Seems that when Errol and Pat Jansen were turning out the newsletter they accidentally skipped # 56. The issue numbers run from # 55 to #57. There never was a # 56 - so don't be alarmed if you find it missing from your collection. If you do find a #56, don't read it - it's counterfeit!

As for prices on back issues, it really depends on how many you order and which ones. The later issues tend to be a good many pages, which means higher postage costs, and they're more expensive to mail singly rather than altogether in a package if you want several. In any case, I have been basing back issue costs on the regular issue rate of \$1.00 per issue, but if you want a bunch of early issues (smaller, so cheaper to copy and mail) I've been figuring it on a cost basis, which means somewhat less than \$1.00/issue, perhaps way less. If you have sufficient subscription money left in the till, I can deduct a number of future issues to cover the cost of back issues.

Which brings up another point: How do you know when your subscription expires? Check your mailing label. This is another nifty thing this computer will do, if you tell it right. You should find that the bottom line on your mailing label tells you the number of your last issue. I try to put a personal reminder in those I happen to notice, but in any case, just check the mailing label and that will cover it.

**ADVERTISING:** Let me know if you have something to buy/sell/swap/etc., and I'll put a note in the newsletter at no charge. This is a free service to subscribers. I'll run your needs/request/whatever for one issue only unless you tell me otherwise. If you don't get what you want just let me know and I'll run it again - but if I don't hear from you after the first time the ad appears, I'll assume you don't need it run again. Since we're doing this for free, all I ask is that you keep the size of the ad down to a reasonable level. I'll be glad to send out that 50 page catalog if you want, but it's gonna cost you.

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OK, now that we've got all the dull, boring stuff out of the way, let's get on with some stuff about airplanes. This is sort of a catch - all section here, so let's just call it-----

## ODDS & ENDS DEPT

Ever wondered how your PL-1/-2 would fly with no fuel pump operating? Well, so have I. A while (quite a while!) back I got curious enough to try an experiment. N75PL has no mechanical fuel pump, since its Lyc. O-235-C is out of a high wing airplane and was dependent on gravity feed; there is no pad for a fuel pump drive on the accessory case of the engine. So N75PL has two electric fuel pumps, a primary which comes on with the master switch, and a backup. As I have pointed out before, even on severe clear VFR days a fully charged battery and operable charging system are must items with this aircraft. Anyway, I got to wondering what would happen if - - and if there was enough dihedral to create enough head to feed the engine, or not. I climbed up to about 5000' above the airport, which has four runways, the longest of which is nearly 8000'. I figured I was unlikely to find a safer place to try this experiment. I then pulled the fuse for the primary pump, and waited for the quiet to start - which only took a few seconds at cruise power. I found that in level flight there was just not enough fuel flow to keep the engine running with more than a sporadic gasp once in a while. However, slipping the PL with the fuel selector set on the highest tank improved the situation a bit. Maintaining about 70 mph (I think - the airspeed isn't the most reliable instrument in such situations) to approximate best glide, and holding full rudder and sufficient opposite aileron to raise the wing as high as possible, I found I could keep the engine running at about 2000 RPM. Great, you say - that's enough to keep flying! Well, I wish it were so, but I'm afraid not. Remember, when one is slipping, one is creating a hell of a lot more drag than in normal flight, and the sink rate goes up proportionally. In other words, although it is possible to get enough fuel to the engine to maintain normal level flight, the airplane cannot be in normal level flight when this is occurring. As I recall, about the best I was able to get out of the aircraft with all kinds of combinations of slips and skids was about 300 ft./minute down. On the other hand, I'm not all that disappointed in finding all this out; after all, 300'/min. is considerably less than the normal power off sink rate for a PL-2. So this trick might someday help you to stretch your glide a bit in an otherwise impossible situation. Also, bear in mind that theoretically, at least, this was a best possible case situation. The O-235 needs less fuel than most of the engines going in PLs these days, and the PL-2 has more dihedral than the PL-1 - 5 degrees rather than 3. So I suspect that with most other combinations, this trick wouldn't work even to such a marginal extent as it did with N75PL.

While we're on the subject of emergency procedures, let me bring up another hint that pays off handsomely to stretch your glide for those of you with controllable pitch props: just put the prop control in the max. pitch position (low RPM, all the way back on the handle). This way, the prop is closer to a "feathered" position and will produce less drag. You'll be surprised what a difference it makes. Go up and try it sometime. Bring the engine back to idle, where it won't hurt it to go to low RPM,

and bring the prop control all the way back. I found that on a Beech Bonanza, this trick would cut our sink rate in half or less at 100 knots - our glide ratio with gear up, flaps up, and prop as described was very nearly 20:1! When you put the prop control forward again, it feels like putting the flaps down; that wind-milling prop is a huge drag producer, approximately half of the total drag of the aircraft in gliding flight. Matter of fact, this hint could really pay off for those of you with controllable props from a light twin - you have full feathering capability! There is a company in Seguin, Texas, Geronimo Aviation, which converts older Piper Apaches with the 150 hp Lyc. O-320 to larger engines. In the past at least they have been willing to sell the O-320s w/all accessories and prop to homebuilders at what seemed to be reasonable prices. With this set up you could be the first kid on your block with a PL with full feathering prop! Obviously this arrangement could probably be picked up from a lot of other parties too.

By the way, the PL-2 is getting some recognition from EAA - take a look at the November picture in the EAA's 1986 Sport Aviation calendar. You'll find a picture of HANS NIELSEN'S PL-2, SE-XCU. A good number of the aircraft used in the '86 calendar hail from Sweden, along with a rare Finnish restoration. It's nice to see some recognition given to those outside the U.S. for their work.

Speaking of non - U.S. PLs, I received a short note from Paz back in November dealing with the Taiwanese PL-1Bs. In his note Paz pointed out that if these aircraft are as advertised then the parts alone are worth more than the asking price. Just the current price of the landing gear struts alone is probably over \$3000, according to Paz! Wow, I'm glad I got mine when I did. When you take into account that you also get engine, mount, and prop, all engine accessories, instruments, etc., etc., these look like a pretty good buy for a PL builder, even if you don't plan to certify it. I'll repeat the address here if any of you might be interested: Vista Aviation, 12653 Osborne St., Whiteman Airport, Pacoima, CA 91331. If you contact these people, please give Lee Conlan of Homebuilders Aircraft Associates a mention; he's the one who gave me the info above on the PL-1Bs.

Also in the same note, I'm happy to report that Paz is back at work at Teledyne Ryan and at home is hard at work on his new book on landing gear design and construction. I must confess that I don't have either of Paz's previous books on light aircraft design and construction, but from the glowing reports I read in some of the back issues, I plan on adding them to my collection in the near future.

Other correspondence: Last issue I mentioned a builder's need for CR-756/757 cherry rivets. This info was passed along courtesy of Tommy Phelps, PL-2 #49. At the writing of the last newsletter, he didn't have the name of the salesman to contact for these rivets, and would you believe the day after I mailed out the newsletter I got his letter with more information! Anyway, if you need some of these goodies, contact Standard Parts & Equipment Corp., 904 N. Main St., PO Box 4600, Fort Worth, TX 76102 - ATTN: Mr. Harold Law. Harold is the man Tommy contacted regarding the rivets and should be able to help you out.

Meanwhile, in the same letter, Tommy had a request of his own - which brings us to the next section - the - - - -

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**CLASSIFIEDS**

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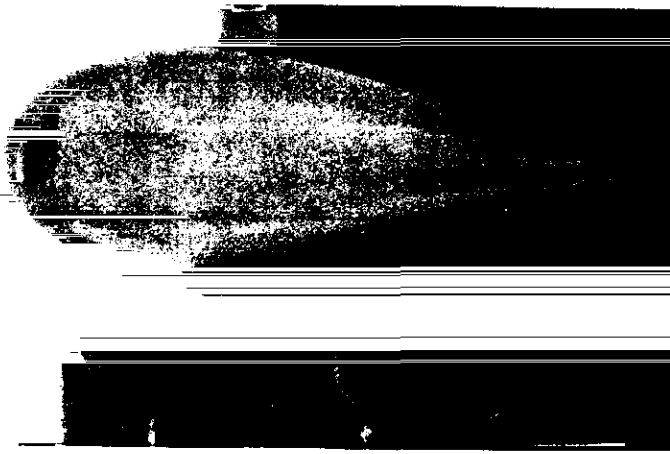
Tommy has some material for sale: 31" - AND 10136-1304 2024 bare T-3511 Q0-A-200/3, for the 2-10-006-33 tee splices. Price is \$17.50 ea. + shipping. Tommy says this is new material, and this price is his original cost on it. Contact Tommy Phelps, 1200 Hamsted, Fort Worth, TX 76115.

Back in December I received a very nice call from Harry Dellicker, who informs me that the original PL-1, serial #1, is again for sale. This aircraft recently went through a couple changes of hands, and the previous owner had decided to install more power. Harry would like to sell the aircraft as is, which currently is with the original C-90 removed and disassembled. This C-90 also needs a crankcase repair; broken main bearing web. This airplane is full IFR, by the way, with dual nav/coms, and in fact was flown IFR regularly in southern California for years. Asking price as is = \$9500 or best offer. The Lyc. O-320 intended for this aircraft is also available - OSMOH, for \$7500. Harry's shop, Del-Air, was doing all the work on this aircraft to this stage, and is also willing to continue the work to upgrade to more power, rebuild the C-90 and reinstall, or will sell at any stage of completion as requested by the new buyer. By the way, this work was all done professionally, and Del-Air has quite a good reputation on the west coast. The engine swap is no simple matter from the C-90 to the O-320, since it requires a complete new firewall forward.

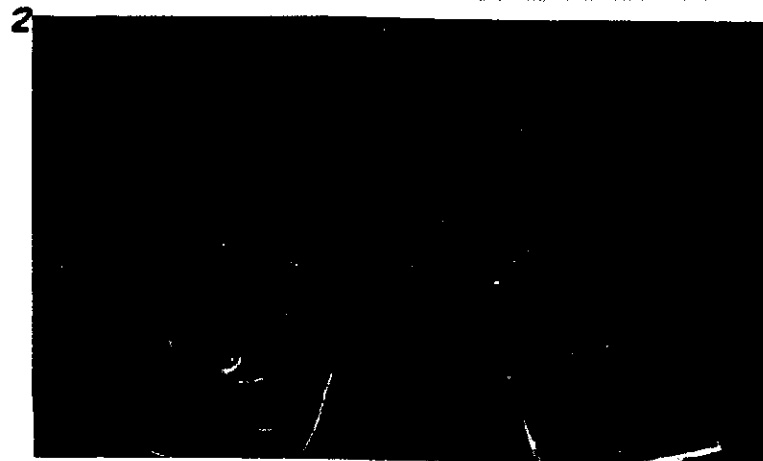
Harry also fabricated two additional fuel tanks, 8 gal. ea., to be installed in the outboard two bays of each wing. These tanks are available, and Harry is willing to make more if there is demand enough. I'm interested in these myself, but Harry didn't give me a price when I talked to him. I had thought about a fiberglass or bladder type tank in the last rib bay and forward of the spar myself, but measured it at only about 4 gallons. Harry's tanks take up two bays, which means that the outboardmost rib must be cut away and a flange formed on the remaining portion. From what I've seen in past newsletters, there seems to be a lot of interest in additional fuel capacity, so this might be the way to go, particularly for those of you who are still working on your wings. If interested, contact Del-Air, 2121 S. Wildcat Way, Porterville, CA 93257, ATTN: Harry Dellicker. If you want to give him a call, his office phone is 209-784-9440.

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That brings us up to date on all the latest, at least from this end of the newsletter. As promised above, the remaining pages will be dedicated to Pete Karmouche and his super slick PL wheel and gear fairings. If you're interested in having a set of your very own, see the last page of newsletter #73 for pricing and ordering information. Contact Pete at 9 Cranfield Ave., San Carlos, CA 94070. Phone 415-591-8429.



1. Stage I pedestal mounted male mockup molds.



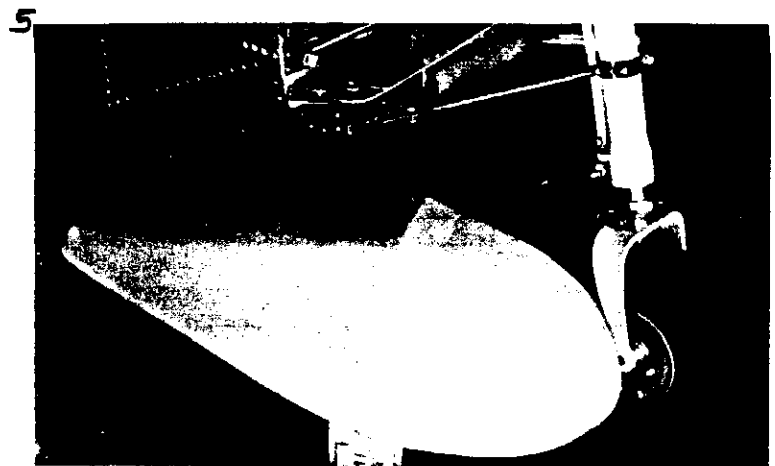
2. Five male molds - ready for Stage II fabrication of frames and female mold glass layup.



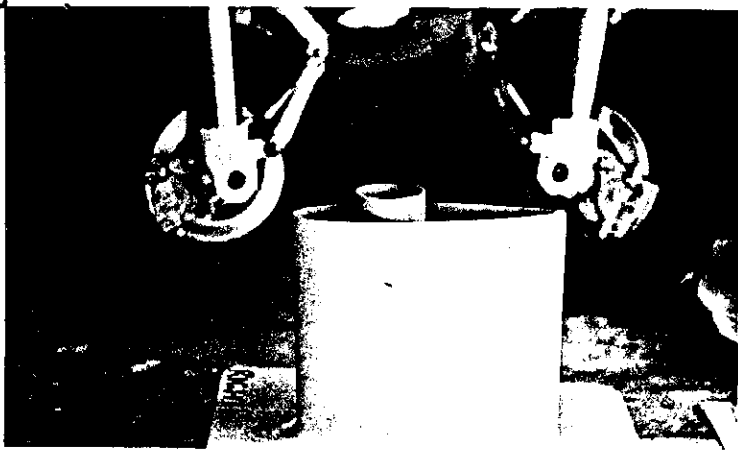
3. Stage I male molds must go through tolerance checks at certain stages. They must be "full" enough at the critical fitting areas to allow for layup cloth thickness. The blueprint loftlines were designed and plotted with consideration to inside clearances. Because Pete chose to use female molds, these clearances had to be increased by the thickness of the parts; otherwise they would end up too tight or small around the gear. Paz designed these fairings to be made from male molds.



4. (Sideways) closeup of the upper left male mockup mold.



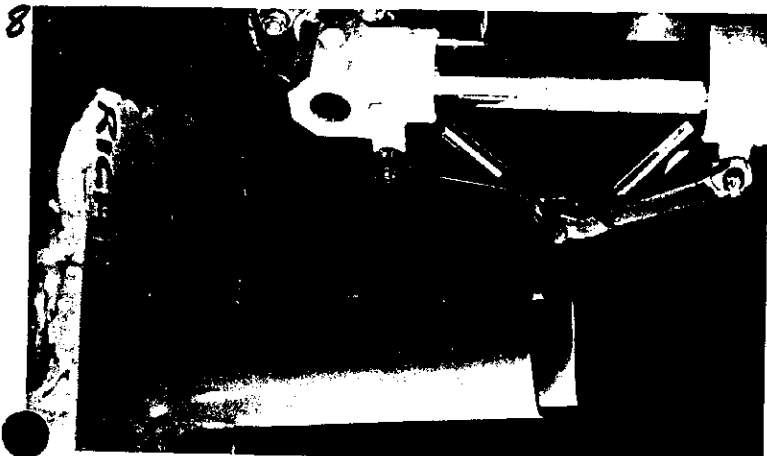
5. The completed nose wheel male mockup mold - the first to be completed.



6. Upper fairing male mold, made from plaster (base), and sheetmetal ribs and skin (sides and inside).



7. Identical "rears" of all three fairings. (Male molds pictured.)



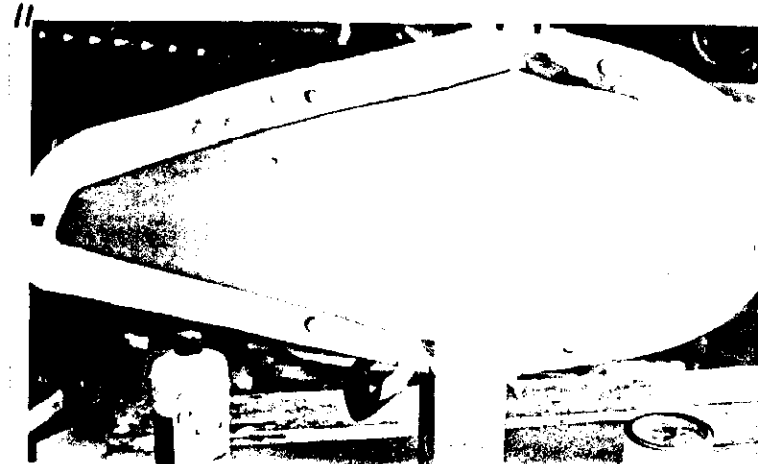
8. The completed 1st stage upper right male mold. Note plaster "wing" surface at base, the exact PL2 shape.



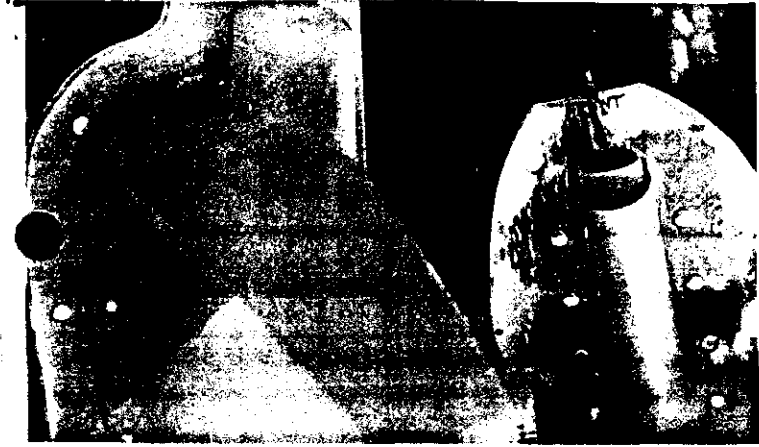
9. The complete set of male molds, ready to pull female molds in which final parts will be made.



10. The completed Stage I set of male molds. Note Pete K. and PL-2 #175 in the background.



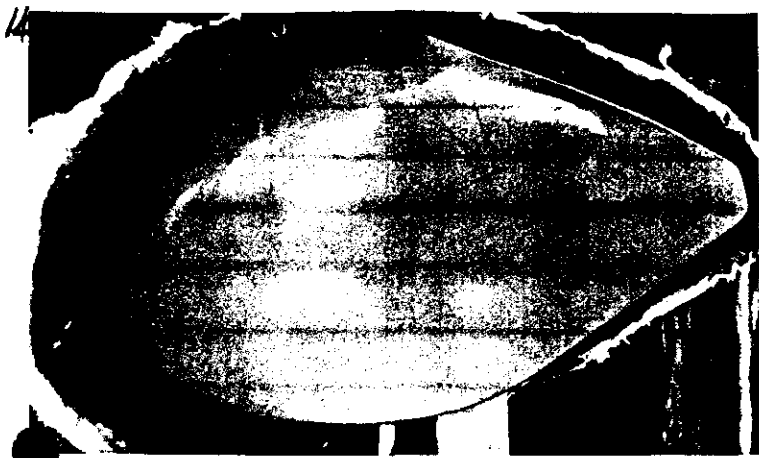
11. 3/4" plywood frame w/locating lugs is fitted to stage I mold. Stage II is application of gell & matt



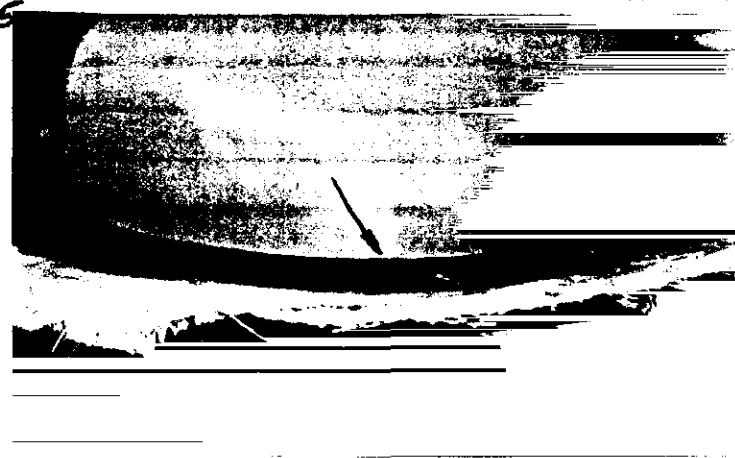
12. L. main & R. strut molds, ready for female mold lay-up. Note locating lugs around separation points.



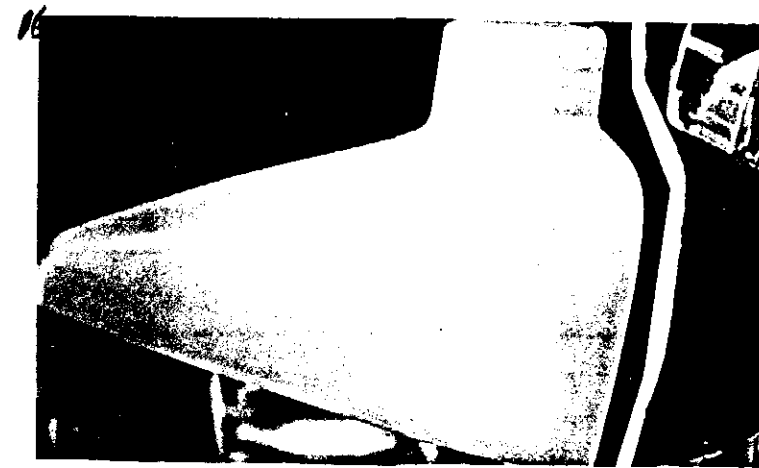
13. Stage II (female) nose wheel fairing mold prior to separation from stage I male mold.



14. Nose wheel male mold after removal of plywood frame, exposing the first half of stage II lamination.



15. It is vital that the frame around St. I be very tight. Here frame is removed and creep is evident (arrow).

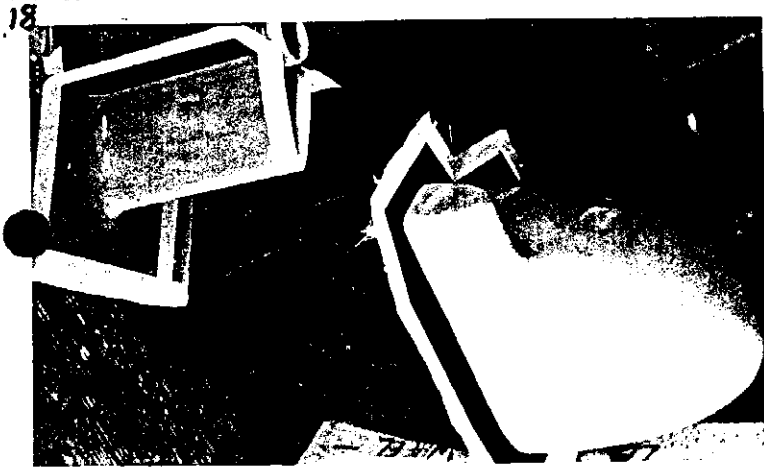


16. R. main male mold ready for rear half of female mold layup. Front half is not yet separated from male.



17. St II female mold sequence. Here front half not separated from male. This shows parts ready for f. layup.





18. Two of St. I molds, ea. w/ one side of St. II matt lay-up cured and ready for completion of the second half.



19. Completed nose wheel fairing female molds.



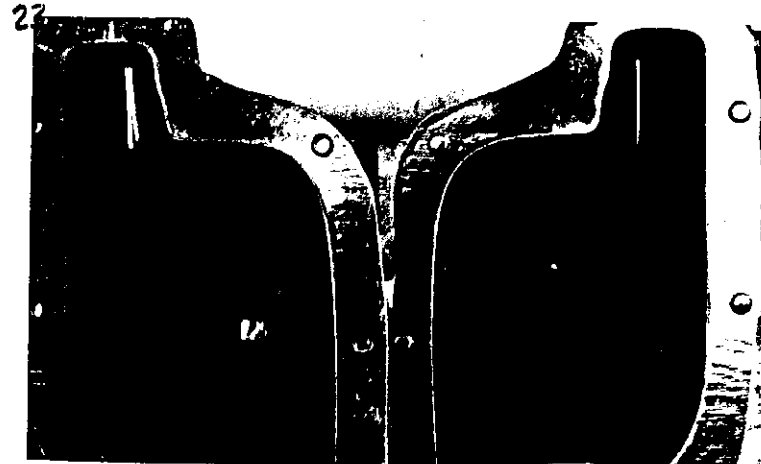
20. Nose wheel fairing, male (inside) and female molds after separation from one another and cleanup.



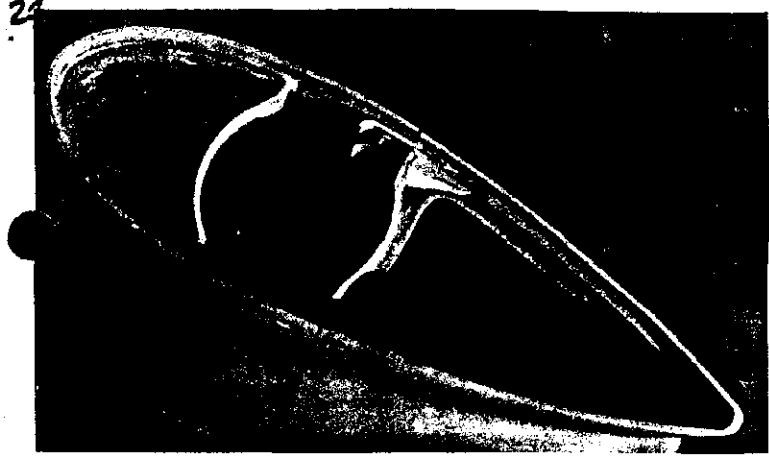
21. Rt. main male gear mold w/ front & rear female halves in foreground. Note locating lugs on flanges.



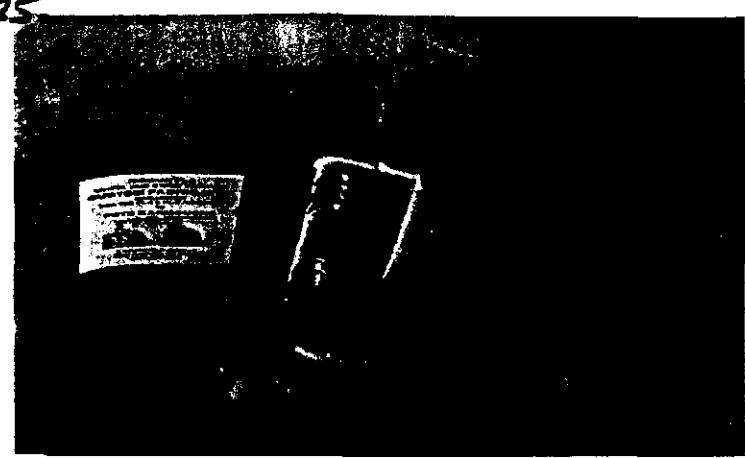
22. View inside st. II female mold. This is a rear half of main gear female mold.



23. L. & R. side female main gear female wheel molds - stage II completion, ready to make final parts.



24. Completed parts: Detail of ribs & angles that are integral to ea. fairing. Blt. to fit gear strut perfectly.



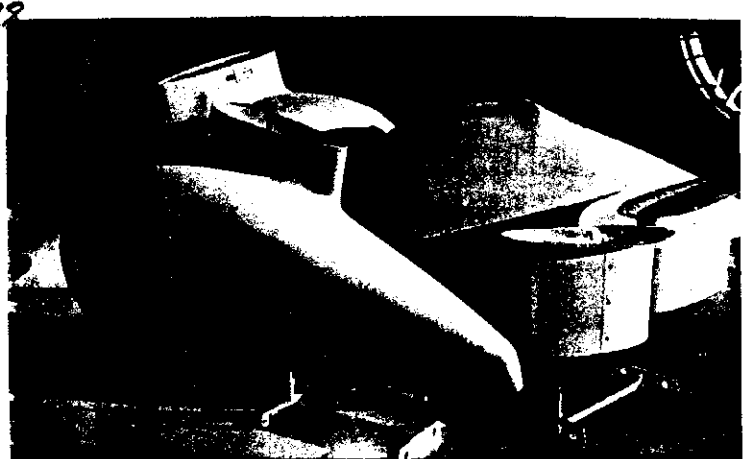
25. Completed parts: View of upper main gear fairing area which fits against the wing.



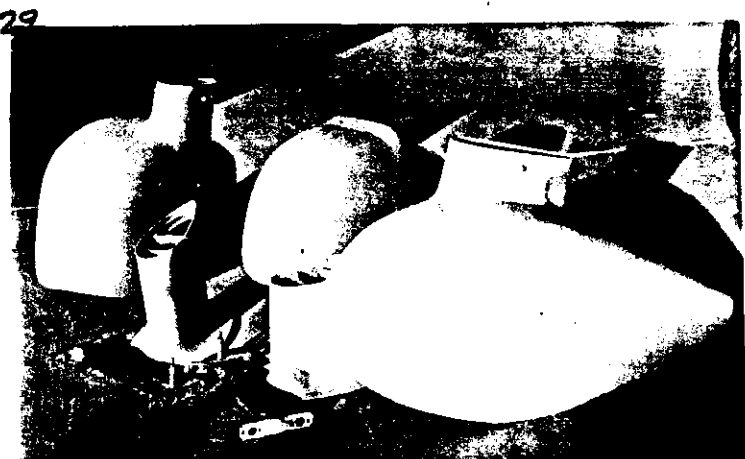
26. Completed parts: bottom view of completed nose-wheel fairing, less attachment hardware.



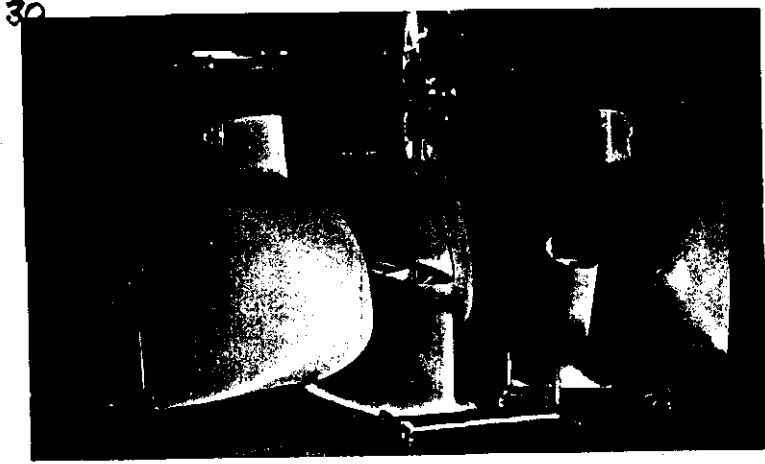
27. Completed parts: Complete set W/all hardware & parts. Note upper fairings resting in place in ea. main fairing



28. Completed set: The 4130 tubes are a sliding fit in main gear axles and are drilled in place for location.



29. Complete set of FL-2 wheel & strut fairings incl. all hwre., fabricated to FL-2 print standards.



30. The Completed Set: Note the exact butt fit where front and rear halves meet. This can only be achieved with female tooling.

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There you have it. PL fans - the slick way to make your PL go faster. My apologies to Pete for slightly condensing some of his remarks to fit the page a bit better, and also you'll note that I turned a few of the pictures 90 degrees - no, he really didn't build them on his wall! As I write this, I've only experimented with a couple of his prints (which are quite good, by the way) to see how they will copy for the newsletter, and it looks like they should be O.K. But please understand that some detail may be lacking by the time Xerox gets through with them.

Meanwhile, I've slowly but surely worked my way through a reading of every back issue I have available, and have picked up

a few thoughts for future newsletters. Those of you who have been subscribers since the dark ages and who have photographic memories may just see some familiar items in the future; I've noticed a few subject areas on which there seem to be questions and comments from many subscribers over the years. And some day (no promises on this) I may work up some form of index for all this information contained in all those newsletters. But first, I've got to get ole N75PL back in the air.

LATE BREAKING NEWS DEPT.

BOB BRADLEY'S PL-1 HAS FLOWN!! After completing most of the text of this newsletter, I received a call from Bob, who informed me that his PL-1, N3892J, has completed its first flight as of Oct. 30, 1985. You may recall a few newsletters ago that I printed up a bunch of pictures of Bob's project, including his most unique workshop. Bob put a lot of good ideas into his PL, including additional fuel and an automatic fuel balancing system, hydraulic flaps, etc., etc. He did mention one idea which didn't pan out, and that was the in - the - cowling mounted instrument venturi. Apparently there just isn't enough airflow at that point to make it workable. He also mentioned that with the battery mounted on the firewall, (he has a 90 hp. O-200 installed) it's somewhat nose heavy. Good going, Bob! How about a pilot report for the next newsletter?

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Your last issue is #N/A

