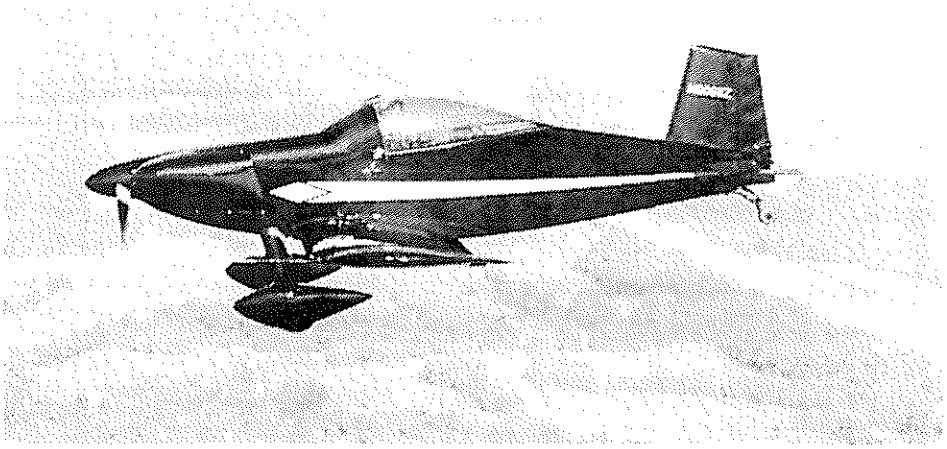
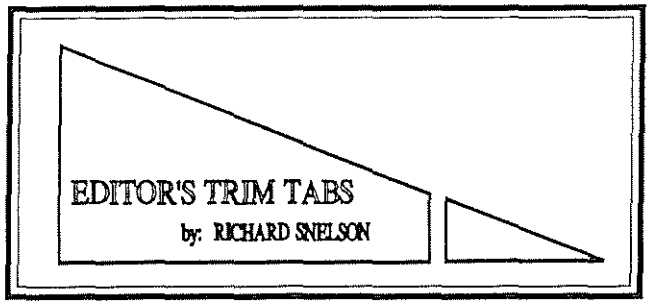
T-18 NEWSLETTER



Who is this invader? Wearing a Darth Vader paint job. Why it's, Steve Hawley, the man from Tucson and his beautiful new paintjob and restoration.

IN THIS ISSUE:



It was with much concern that I read your messages and contributions to the subject of stall/spin accidents. Much has been written on this subject in past newsletters and forums, but still this "pilot error" accident occurs. This month I received a touching letter from a grandson who had lost his 80 year old grandfather, Leland Floyd Reilly, to an approach to landing stall/spin. Mr. Reilly was flying with a gentleman who was about to purchase his aircraft. I don't have the full findings on this accident so I can't comment on exactly what happened in this case. I will and must comment however on what is and what is not a checkout in a new unfamiliar homebuilt.

Unfortunately owner checkouts are the rule rather than the exception. A couple of straight ahead stalls and back to the pattern? This is a bad choice for the new owner. Forget the macho crap about how well you can fly! Find a flight instructor with either type experience or experience in other homebuilts. Insist on slow flying the Thorp until you are extremely aware of approaching stalls. Pulling the power and gently raising the nose until it stalls is only a small part of stall practice. It fact flying the aircraft on the edge of stalling is much better practice. With or without stall strips my Thorp will let you know the stall is approaching. Could a pilot unfamiliar with the Thorp feel the approaching stall? Yes, of course, but it does takes some practice. Either straight ahead, or in 30 degree bank turns the shudder on the controls is there. Practice taking the aircraft up to the shudder, in both departure and approach to landing attitudes and configurations, back-off, do it again and again. Learn the feeling so well that it becomes ingrained in your flying.

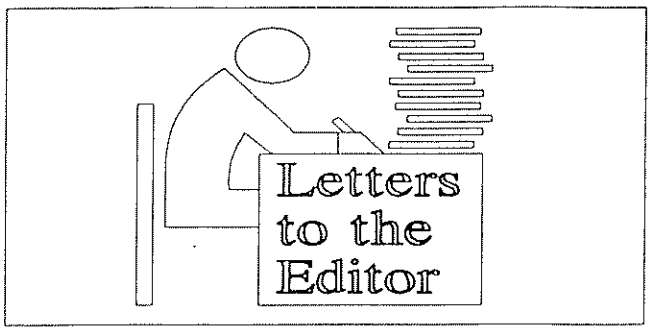
For the reading impaired I say one more time! A Thorp checkouts is not: two straight ahead stalls, a couple of 60 degree bank turns and back to the pattern!!!!!!!!! Pass this along, not everyone gets the T-18/S-18 Mutual Aid Newsletter.

We had what my son Rich Jr. calls a high level problem this issue. A lot more material that I could get in the 20 pages of the newsletter. Thanks to the many email messages and letters "Letters to the editor" is overflowing. Again Dick Penman has graced the newsletter with more of his fine detailed drawing and ideas. Only a part of them are in this newsletter, so you have them to look forward to in the December issue. Also in December you will find some great drawings from Gary Cotner on an electric flap drive using the same actuator as the RV. Bob and Susan Highley have sent photos of their trip from Florida to Placerville so look for those also in December. Don't stop sending email and letters, they are the heart of exchanging ideas and safety tips for flying and building the Thorp.

I would like to have photos and information on Placerville if someone could forward them. I did hear that a great number of T-18/S-18 were present at that great event. We had good weather for Ky Dam and got in a lot of great flying there. Photo's to follow.

For those of you that haven't heard, **Paul Poberezny** has started a "New" association. It called **Sport Aviation Association** and is for the grass roots flying folks. I've included the handwritten letter received from him. Membership is $15 a year, count me in Paul. This is Paul's effort not an EAA add-on. His letter will let you in on what we talked about.

What do you think it would cost to build a basic Thorp T-18 from plans? Making the parts as in the old days. And keeping it very simple. Open cockpit, with a fiberglass turtle deck behind the seating. Let's say we use an 0-290 G engine. I think you could have some very low cost flying. Send me your estimates for the next newsletter.

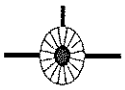


Dear Richard,
I always am happy to see the T-18 Newsletter in my mailbox. In the No. 103, just received, Tony Schischka's informative stall tests opens the subject and I agree The BT-15 also had the snap roll tendency using high rudder turning on final and some were fatal. This can happen to the T-18. It is good technique to always keep the ball centered. Also, there should be no need to make forty five degree banks turning onto final. Flying the 737, with passengers, a bank of 15 was desired for passenger comfort.

After reading Tony's article I took 54FS up for similar tests, using his bank angles. I had made these before on N54FS because some T-18's do fall off rapidly in a stall. Mine does not and I believe this stability is due to having stall strips in the narrow wing root section (folding wing) which gives early warning of wing stall (buffet). Additionally, I have the 10" fiberglass vertical fin extension for internal antenna which gives an 8" higher stabilizer extending into air undisturbed by airfow past the stabilizer at high angles of attack.

My T-18s approach to stall buffet comes in at 62 knots (Approx). I made 45 deg. banking turns clean, also with lst, and 2nd notch flaps. Note:The 40 deg. notch was removed so that after manual use it would return to 2nd notch. In the 45 Deg. banks, with power at 15" I pulled it into deeper buffet in each configuration and could control turning to right and left with no drop off. The airplane was telling me it wanted to but it would not as I offered different rudder and aileron inputs. Although these stalls are for approach to landing practice, with 3 to 500'/min descent I tried to make them in level flight. The sharpness of the wing leading edge will also have an effect on the stall but I don't know much about that. Perhaps this will open further input (discussion) regarding this dangerous characteristic present in ANY airplane.

The T-18 Newsletter is much appreciated Richard
Frank Snedeker - snedeker@nwlink.com



Dear Mr. Snelson:

Thank you for sending Newsletter #103. A pleasant surprise for me and timely too as I have been actively flying my airplane since nursing it through its condition inspection.

In the "Letters to the Editor" section I am motivated to add some thoughts to the article Mr. Schischka contributed to T-18 flight safety.

Remaining as coordinated as practical while flying the T-18 is excellent advice and we all need this refresher prod when flying a somewhat demanding airplane. I personally appreciate his observations and especially the descriptions of the high altitude probing of the resultant characteristics while being coordinated or uncoordinated and the obvious potential for a significant upset. We must not allow this airplane to fly us when close to the ground .... we must be a disciplined manager of this airplane and exercise our conservative judgement in order to prevent another T-18 from inadvertently demonstrating its stall characteristics with deadly *results.*

In the spirit of supplementing Mr. Schischka's article I would like to comment from my own experiences in general and specifically about my T-18 experiences and how I try to fly it.

Returning to basics we must never forget that stalls are a result of an angle of attack that exceeds the critical angle for that particular

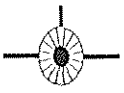
airfoil cross-section. We can cause this angle to be exceeded by the relatively gentle 1 G stall or by imposing a greater than 1 G load on the wing and generating a "wing loading stall", often referred to as an accelerated stall. I feel this knowledge and understanding must be paramount and be crystal clear in its application in the mind of each pilot.
Other contributory factors are, or can be, very important and can determine the severity and the unique characteristics of what the airplane does immediately after the stall break .... but if while flying the traffic pattern you prohibit your T-18 from exceeding the stalling angle of attack by paying strict attention to your approach indicated airspeed, angle of bank (which loads the wing and increases your indicated stalling airspeed), and your airplane's attitude reference the natural horizon, you effectively remove the danger of less than perfect flying technique.

We must remember that if we observe the above precautions and use proper flying discipline and technique that the Thorp lends itself to sideslipping to a landing with reasonable safety. Obviously, my point here is that being uncoordinated or even aggressively cross-controlled will not cause the Thorp, in and of itself, to stall. And if it doesn't stall it won't exhibit any of the threatening characteristics Mr. Schischka so vividly describes.

My thoughts may seem boringly simplistic and insultingly obvious to most T-18 pilots..... but I have just finished going through the T-18 back issues which Mr. Snelson kindly sent to me..... it would appear that we, myself included, need to be reminded of the how's and why's of this airplane and to keep our performance priorities absolutely correct if we are to do our best to avoid another stall/spin/crash in the traffic pattern. To me, the priorities are to determine for your airplane the indicated airspeed of a typical landing configured 1 G stall, add a minimum (smooth air) of 30% to that indicated speed then using this speed as a firm indicated approach speed. Make an irrevocable rule not to exceed a 30 degree bank in order to "force" a traffic pattern to lead to a runway (be a smart-ass and go-around), and pay close attention on each and every approach as to the typical nose attitudes you generate while doing this so that if you lose your airspeed indicator or you become preoccupied in the traffic pattern an "unusual attitude" will be noticed and cause you immediate alarm because you will know the ANGLE OF ATTACK is probably increasing. The above comments are mine and I am not an aeronautical engineer nor am I a test pilot.... they simply represent what I hope is a valid enough perspective to perhaps help keep myself and others from allowing our Thorps an unscheduled demonstration of its stall-break characteristics.

Larry J. Church
1015 Parkview Dr.
Los Lunas, N.M. 87031

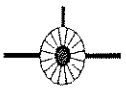
Dear Rich,
I am currently looking at several flying Thorp T-18 aircraft for sale and would be interested in receiving your newsletters as well as all past issues. Please tell me how to join the Thorp T-18/S-18 Mutual Aid Society, the cost for all past issues of your newsletter, and where to send the check. Thank you. I look forward to hearing from you.
email: 2rph@nemontel.net
Bob Haugo
PO Box 793
Scobey, MT 59263
Phone 406-487-2813



Richard - My T-18 is currently on hold, while I erect a building and finish what I have vowed is my last car project until the airplane flies. I expect to be working steadily on the T-18 sometime next year.
email address is: ben.m.harrison@boeing.com
Ben Harrison

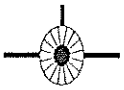
Rich,

Do you know of any T-18 plans available?
Thanks Ron Weiss.
email backcourse@juno.com



Subject: How was Oshkosh?

Just a short note to make contact again. How was Oshkosh? Understand there were not to many T18's. Have a new T-18 builder here (well hope so) he will contact you if he hasn't already, (Wayne Mathews)to get all the news letters. It looks like he will opt for the complete kit. Will be most interested to look at kit to see quality. Maybe the kit will make the T-18 competitive with RV's! Got my T-18 at home doing 100/ annual plus those things I've be promising to do for some time.
Regards,
Tony & Viv Schischka <a.schischka@xtra.co.nz>



Subject: Fuel valve installation.
From: "Paul-Ernest Lévesque" <pelevesq@globettroter.qc.ca>
Dear Richard

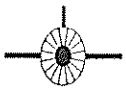
I know you are a very busy man but I have a question and do not know where to ask.

I remember reading some thought on not installing a fuel valve directly on the tank of a T-18, I do not know where I had that information.Tell me what you think: could the valve installed directly on the tank cause a crack later from vibration over the long run. Or should I install it on a remote location. How about your aircraft fuel valve installation.

Thank for the help and have a good day

Paul-Ernest Levesque

Editor's Note: My fuel valve is installed on the firewall in the center below the tank. I turn it off and on with a push/pull cable that terminates on the bulkhead below my left leg. I remember reading about cracks caused by mounting the valve on the tank itself. It does present a long lever arm and would stress the welded on boss over a long period of time as the valve is turned on and off. Most of the valves are a little hard to operate and this would make the stresses higher.



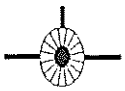
Dear Dick;

Please accept my apologies for having not re-newed my membership to the T-18 newsletter. I have enclosed a check to hopefully catch me up to date. If there have been issues missed and they are easily available, please send them.

All is well with good old N89ER. She has about 555 hours on her now and a significant portion is night and/or instrument. I don't remember if I told you that I have installed a Hartzell constant speed prop. It didn't help the top end or cruise speed at all (nor did I expect it to) but the take off and climb is great. I no longer sweat the hot/ heavy/high departures. I don't recommend the CS prop for everyone but if you are flying at gross weight in hot/high conditions it is worth-while. Evan A. Roberts P.O. Box 8288 Horseshoe Bay, Texas 78657 (830) 598-6797

Subject: Kentucky Dam Fly-In
From: SteveHawl@aol.com

Hello Rich!! I plan on coming to the Ky Fly In. My T-18 is all back together. Today I ran the engine for the first time in 9, months. The new paint job is spectacular!!! You won't recognize me anymore. Sure do hope the weather is good. The only thing I have left to do on it is get some N numbers put on the fin. Should fly it this next week without any problem.
Steve Hawley in Tucson
Editor's Note: Steve pulled up along side me while we were over Ky Dam and I didn't recognize him! He has done a beautiful restoration on his bird. Great job, Steve.



Rich-

Suz and I are in Cheyenne, WY on our way back from Placerville Fly-in. We had about 35 or so T-18's, many I'd only heard about in the MAS Newsletter. About 60 T-18ers flew in and out at various times. Lyle Flemming was there. He has the distinction of giving the first T-18 ride to Ken Brock in 1968. Lyle is now "over 85" but still an active T-18er although he doesn't fly himself any more. The hosts really put on the dog for all of the visitors.
That would be Hal and Nancy Stevens, Jim and Lil Crichfield, and Mac and Rena Booth. The Hangtown Chapter was out in force to make it a great event. I'll let the principles fill you in properly.
Get it flyin'
Bob and Suz Highley
N711SH
email: N711SH@aol.com
Editor's note: I'm saving an article and pictures Bob and Suz sent for the December newsletter. Sounds like a trip I would like to make.

Subject: Stab Rigging Report
Hi Richard:

I told you I had been talking to Bill Mnich back in Maryland about stabilizer anti-servo tab rigging and had asked him to summarize his work for the benefit of the guys coming to the Placerville Fly-In. Bill sent me this Email which is of great interest.

The original problem was that he was experiencing buffet on final as if he was at an extreme forward CG condition, when he was not.

He did a weight and balance check, first thing, and found that to be within the normal range. Following that he did the rigging check as outlined by Dave Neustel.
Lyle Trusty

Bill Mnich's Report

Lyle -
I finished everything in time to get off one flight last weekend, and there's no doubt in my mind the problem is solved. Although I wasn't able to do a thorough evaluatiom, I determined that I have PLENTY of Nose-Down trim. Here's some info I hope will be useful during your rigging forum this weekend at Placerville. Wanted to send it sooner but I've been drowning in work-related stuff this week.

Again, I've only got one hop and four landings on the airplane since I put everything back together after the trim fix, but so far I'm elated with the improvement.

Conditions at takeoff were 1540# GW, with a cg of 64.9 in. (this based on an assumed weight for my passenger because I didn't want to ask her for an exact number!). Previously, this set of conditions would have put me at full ND trim after burning off about an hour of fuel at cruise, which in my airplane would migrate the cg to about 65.3 in. Obviously, that was totally unsat and the reason I went to all this trouble in the first place.

Now, qualitatively, I seems to be roughly in the middle of the trim range with a 65 in. cg location, which is a HUGE improvement and should be right on the money. No offense to the original builders of my airplane, but I discovered that the 513 tab arms were done wrong from the beginning. In fact, compared to the new ones I received from Mike at Classic Sport A/C, which appeared to conform exactly to the plans, the old ones were fully a quarter inch too long. They were also asymmetric, which caused a mismatch in servo tab position of about 3/8 in at all trim settings. In addition, I probably made the problem worse several years ago by failing to verify the exact hole distances on the 521-1 links I installed to replace the originals (John sez 3.07 inches!). It was a challenge to install the new 513 arms to my airplane because once everything was in the proper rigging position, I needed to bend them laterally and drill them to match the mounting holes already in my tabs. But eventually it all went together quite well and fit like a glove.

In any case, I followed Dave Neustel's rigging procedure from Newsletter
No. 93 religiously and found it to be an excellent reference.
Here are a couple lessons learned:

- Don't bother with the traditional "spirit level". It certainly works, but I'd invest in a nice digital one (which have the bubble references too). With this instrument, I was able to measure everything to a tenth of a degree, which is much better than can be accomplished with the standard level. Either way, once you get your template exactly lined up and place accurate reference marks on the aircraft for leading edge stab position and 521-1 link angles, there was no need to keep the tail jacked up in the air to maintain level wrt WL 42. An interesting discovery from using the digital level was that I had a 0.2 degree difference between the L and R WL 42 references, and the exact measurement is dependant on WHERE you place the level. I just picked a spot and tried to stay consistent.

- Once you establish the stab in the trim position (5 deg Leading Edge Down), I found it easy to keep it there with a carefully sized block of wood placed behind the walking beam in the cockpit and held in place against the aft bulkhead with a bungee wrapped around the control stick. Worked great for me. However, if you remove the wood to move the stab, always double-check it against the template when you put it back to the rigging position. The template should be taped firmly in place on the fuselage and not disturbed throughout the rigging process. This is your "truth data" once it's properly located!

- Step 6 can be a little confusing, but once you read it a couple times and look at the hardware it will make sense. This is a very tedious step but once you get it exactly right, simply place a reference line of masking tape on the fuselage just inboard of the -1 to use as a "sight" for the -1 leading edge from that point on. The human eye is very good at matching straight lines, but of course, this procedure is contingent on having straight leading edges on your -1's! Where the procedure in Step 6 calls for a .080" feeler gauge, I found it easier to simply use a Champion spark plug gasket; they seem to be very consistent at exactly .080" in thickness.

- Step 7 contains an error that was corrected in Newsletter No.99 (thanks Lyle!). The control stick should actually be about vertical, not 7.5 deg forward as described in No. 93.

- In Step 8, I had a hard time trying to clamp the wood to the trailing edges, so I made some very thin wooden wedges and slid them into the gap between the tab and the stab. This held each tab in place quite nicely once the wedges were forced gently into a snug friction fit.

That's all I can remember for the time being, and I gotta go. Hope the above comments reach you before you leave for Placerville and are of some benefit to your audience. Have a great time! Wish I were there. Best Regards, Bill

From: "Harold Smith" <hmssws@hotmail.com>
Rich,

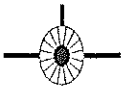
Thanks for all the back issues of the newsletter. I wish I had them BEFORE I bought the T-18. Not that it would have stopped me from buying a great airplane, but it would have made me a more intelligent buyer. As it is, I lucked out and bought a fine example of the T-18. It flies great and nearly all the modifications I have been reading about have been incorporated into the airplane.

The one bad experience in buying the airplane was that the previous owner (not the builder) said he had lost everything on the airplane, including the Airworthiness Cert., limitations, drawing, builders log, etc. Everything. Well, I bought it anyway.

I contacted the FAA and they helped me get all the documentation in order. They were really helpful. That's right, I used the FAA and helpful in the same breath. The only thing they did wrong was to issue me a Std. category Airworthiness Cert. instead of a special. I did not know the difference as I am new to this sort of thing and exp. a/c., even though I used to own a Varieze. It caused me to make an extra trip from Houston back to San Antonio to get it right.

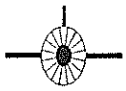
I used a friends, Steve Holbert, T-18 to learn to fly tail draggers. We flew for about 10 hours and then he turned me loose in my T-18. He has the 160 HP and I have the 180 HP. I put a new Aymar-Demuth 68/80 prop on it and I leave Steve in the dust. So far I have found no nasty habits of the aircraft. I have flown it in every configurations possible and it is stable even with forward CG and full flaps it flies very nice, no tuck or anything. I have not mastered the tail dragger
but am starting to feel a little better in it. My wife fell in love with it on her first flight (of course she loved my Varieze to). The plane and I are still in the stage of forming a relationship where we each feel comfortable with the other. I still have some things to fix on the airplane but all will come with time and money. Oh, the builder was Cecil Williams from Florida and the side number is 856CW. Does anyone know this gentleman? I would like to talk to him.
I look forward to the coming newsletter and any future T-18 gatherings.

FOR SALE:
Also, would you advertise the prop I took off the T-18. It is a Hartzell 70" prop. I have already sold the governor. The prop is in good shape. There are no logbooks for it though, as I said above, the previous owner lost everything. I am asking $1,000 plus shipping (I'll crate it free). Thanks for all your help. I look forward to meeting you and all the other T-18 er's.
Hal Smith



From: "J.E. (Ted) Strange" <strange@silk.net>
Dear Richard:
The summer has come and gone and I am not flying yet. I bought a T-18 from an estate sale after it had been sitting outside for nine years with a hole in the canopy.It was quite a mess. (Why didn't some of the pilots that passed the plane put some duct tape over the hole) I trucked it home thinking I would be flying in 60days!!!!!! I am somewhat familiar with the T-18 as I spent 7 years building one only to give up after running out of steam. Some thoughts:
When you are building your brake pedals,I would recommend you rivet nut plates to the rear of the mast(Drawing #491) so that in the future if you ever have to service the brake cylinder it will be a lot easier to get at. Keep fiberglass parts away from the exhaust system-FG burns fiercly once it has ignited. Use your wife"s card table to arrange your tools on when you are working at the airport. I have a fuel injected IO-320 and the sniffle valve was missing from the oil pan.This is

a one way valve that allows extra fuel to drain onto the tarmac but closes when the engine starts so that it doesn't affect the mixture.I obtained a PVC valve from an automotive house and it seems to work well.
I found it was hard cutting FG cloth straight with scissors, so I solved the problem by using a paper shear. I imagine the cutting wheel your wife uses to cut cloth with would also do a good job.
Richard, I am indebted to you and those that have gone on before and broken the trail, it has made it a lot easier. You Americans have given so much to the world, I think there is a certain place in heaven for your kind. Best wishes from Ted Strange<strange@silk.net>



Subject: Rivets & sheets
From: ljkrume@sandia.gov
Hey Rich!

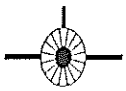
I'm about to start the wing on my T-18C... one of those performance boosters, right? In assembling the center spar it's become apparent that the need for dimpling rather than countersinking the web is mandatory. I'd like to warn others not to cheat in such critical structures. I'll mail the copy of a page from "Analysis & Design of Flight Vehicle Structures" by E. F. Bruhn, 1965. It should be helpful for people making such decisions with regard to rivet size and sheet thickness. These were compiled by various manufacturers as recommended values based on actual tests, rather than analysis which becomes too complicated. Table "B" indicates that the minimum sheet thickness for 1/8" rivets in a countersunk hole is .051". I've seen people cut countersinks in .040" sheet to their own jeopardy. One illustration shows a cutting action under the head when there's little or no bearing surface against the shank of the rivet. Table "C" also shows that flush rivets through a dimpled sheet may be stronger than a countersunk sheet. Some utility exists in that the sheets themselves have an interlocking effect against shear.

Clearly, these considerations apply to most joints on the T-18. I hope others will see the implications, and that these charts will be useful to promote thoughtfulness in their work.

Best regards to you, our editor, and all you builders,

Les Krumel
(505) 281-5386
ljkrume@sandia.gov

Editor's Note: Sorry we didn't have space for the tables in this newsletter. I do think they are available in several of the aircraft sheetmetal books sold by the EAA. Good point Les.



Subject:
New owner for N8613A serial number 48
From: RnT082338@aol.com

Rich,
Just to let others know the fact that I have purchased old 613A from Harry Paine. On the 3rd of July Harry said a fond farewell at the Santa Maria Airport in California and I departed for my home in Washington State. After an overnight at Redding, California I arrived at my home on Crest Airport in Kent. What a wonderful little airplane she is. No dishonest characteristics, lots of fun to fly.
With luck, my wife and I will be at the Placerville flyin in early September. We have already been to two fly-ins with 613A where many times I am the only T-18 there.
I have the great majority of newsletters that came from Harry but none since 1993. What is the current fee for the nl and what info can I get.

Roger Thompson
17649 S.E. 293rd Pl
Kent, WA 98042
rnt082338@aol.com

Subject:Oshkosh
From: "RICHARD C. EKLUND"
<ThorpT18@compuserve.com>

I don't have my pictures back yet so can't provide a T-18 count. We had a small group at the Nature Center and I discussed the following: The myth that I heard recently, ie: "If the spar center section mods that John Thorp recommended are done, the aerobatic gross weight goes to 1500 lbs." THIS IS WRONG, OF COURSE. The entire airplane was designed to 1250 lbs, +6 and -3 g aerobatic category limit loads. This may explain why people are bending (rather than breaking, thanks to metal airplane allowables) the wings at the outer panel to main spar join with two persons aboard while doing aerobatics. I also endorsed the use of stall strips per Tom Kern's instructions and agreed to review John Even's more inboard location centered on the second rib. I discussed the two bulletins I have issued due to errors in the drawings. I mentioned the coated exhaust experiments Lyle Trusty is doing. The new laser cut rudder kit was shown at the aircraft and we had a lot of favorable comment. We announced that the empennage kit would be developed next, since it is common to the T18/S18. Both Dave Neustel and I talked with a number of builders and prospective builders through Sunday the 3rd. It was good to see a number of new young builders and owners. Bill Mnich was at the forum talking with Dave Neustel. His full page (pg 93) in the August Sport Aviation with his T-18 should give us a boost in recognition.

I am attaching a file with the current parts and subassembly kit
offerings. I will follow up when I get the pictures back.
Richard Eklund
Eklund Engineering, Inc.

Eklund Engineering, Inc.PO BOX 1510LOCKEFORD, CA 95237209-727-0318For the Thorp T-18 builder, the following components are offered:
Thorp #506 6061-T4 Tip - Horizontal Tail - $90 per set (4) plus shipping These stretch formed aluminum skins have flanges for rivet joining the halves, or they can be trimmed and
welded per the drawing.
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Thorp #537-2 Upper Main Beam Channel Extrusion - $125 plus freight Custom extruded 2014-T6 aluminum, 133 inch length by 2 x 1.25 inches to reduce waste and trimming time.
Thorp #537-3 Lower Main Beam Angle Extrusion - $105 plus freight
Thorp #1072, 4" Prop Extension, Clear Anodize with #905 Driving Lugs for the Lycoming O-360 engine - $235 includes UPS standard delivery in USA. International delivery quoted promptly.NOTE: Additional sub-assembly kits are under development with the goal of making a complete airframe kit available in the near future

Hello Richard:

Two weeks ago N77KK touched down at its new home in Palm Springs, California. This T-18 was built by Ken Knowles, and was the prototype for the folding wing as designed and built by Lou Sunderland. (See July Newsletter, and "Jane's Pocketbook #14, Home-Built Aircraft", p 237) The plane was last owned by Norman Justus, and was represented and sold by his lifelong friend Harry Arnold. Really nice guys these! I felt some sadness that they were selling their plane, but then I realized they were pleased knowing that their fine aircraft has landed in the hands of a real aviation buff.

What an airplane! I have many hours in a Bonanza, and it is not a stretch to say the Thorp flies in the same class. Smooth as silk, yet quick and responsive, and easily as stable as Marv Albert. And I want to tell you about the landing gear.. Kilo Kilo has some real legs under her. Titanium maybe? To show my appreciation for surviving such a hearty pounding, I'm spiffing her up a bit. I've wired in a monster GPS, a digital OAT, a graphic artist adding some nose art and of course no IFR ship could be certified without a CD player. Also, there must be a law against black leatherette in Palm Springs. Pizza chefs were cueing up to try a new flash bake technique. Media coverage of the pizza guys was limited .... they encountered Polaroid melt down and forgot their IR film.. Plush velour is being installed today at least my butt won't be zapped to the seat and my back epoxied in place.

Many thanks to all the EAA guys at Lincoln Airport CA especially Keith Peterson ... it took a brave man to check me out in the T-18.

Hope to meet many of you all in the future. Sincerely, Joe Lukins 2214 Yosemite Dr. / Palm Springs, CA 92264 / Ph & Fax 760.325.2552

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Wing tanks, 7 gals each plus 29 gal header tank.
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For sale:
1-walking beam complete 550 used-with 552 sockets, 553 plates and link. $100
1-Pacesetter 200 by Cassidy wood prop 68-66 for 150hp T-18 Excellent condition $375
2- aileron bell crank ass'y with 499 hubs and bearings pair $40.
Wanted: Prob Spinner T-18 and back plates. Prop is Sencenich 5 3/8 hub thickness
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Elmer Hymen 36 Center St. Midland Park, NF 07432 Phone :201 444-7432

For Sale: Lee Skillman's Thorp Widebody Project is for sale. This is a great buy, and Lee would like an offer for the project. Lee does great work so if you are looking, check this one out. Lee also has an all metal Thorp cowling for sale. Phone: 334-633-3535

For Sale:
Slightly used Dynofocal engine mount for T-18
Lots of 1/8" Clecos
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For Sale: Beautiful Thorp T-18 Caps
Call or write, John Evens, 6855 Allison St., Arvada, CO 80004 Phone 303-420-2724

Classic Sport Aircraft S-18 Plans and parts for both the T-18/S-18 Phone: 209-539-2755

Ecklund Engineering T-18 Plans and various Thorp parts and subassembly kits are now available. Call Dick Ecklund at 209-727-0318

Ken Brock Inc. Thorp machined parts and welded assemblies. 714-898-4366

Beautiful T-18 shirts. Call Marie McKinley at 704-628-0908 for more information.

Canopy Covers. Call Ed Ludtke at 605-361-2301

Subject: T-18 N851LT Egt/Cht report From: DadTrusty@aol.com

I promised that I would send you the results of testing my new exhaust system after I got it coated with ceramic. Well, I got it coated, at considerable expense, and finished modifying my one-of-a-kind-cowl to accomodate it. The results are different than I expected, in that the egt's are the same as I had with the mild steel pipes, however, the new pipes have improved performance over the old ones. I think they are much smoother flowing than my originals because the engine turns 50 RPM more in the climb and 20 to 40 RPM more at cruise. It's still too early to tell what the final changes will be, and I won't find that out until I fly it awhile at different altitudes, at various gross weights, and in different weather conditions. Meanwhile, the airplane apparently performs a little better and the engine runs nice and smooth.

I'm attaching a copy of the test summary. The file is "egt/cht". I'm looking forward to hearing about Oshkosh, since I couldn't be there. Talk to you later, Lyle Trusty

T-18 N85ILT EGT/CHT survey, 7/27/97, Wt/Balance: 1,479 lbs, station 65.0" cg at T.O.

INSTRUMENTATION: Vision Micro-Systems, Inc, with 4 cyl cht/egt peak detector & Fuel Computer systems.

ENGINE: Lycoming O-360-A1A, 180 HP, MA4-5 Carb, Light Speed Engineering Electronic Ignition, cooling plenum chamber separated into individual right and left compartments, egg-crate type flow straightener under carburetor inlet. Dean Cochran Stainless Steel cross-over exhaust system with 1-3/4" ID pipes and .003" ceramic coating inside and outside.

PROPELLER: Sensenich Fixed Pitch, Model # 76EM8-86, S/N 19706K, Restricted operating range per Specialized Testing Service 2725 - 2840 RPM.

CRUISE CONDITIONS*

% pwr	cyl # 2 cht/egt	cyl # I cht/egt	KTAS(mph)	Fuel Flow (gph)	RPM / MP	Press Alt
70	350/1,510	350/1,470	170 (195.6)	8.2	2,600/21"	8,500'
71.5	340/1,520	350/1,490	173 (199.1)	8.1-8.7	2,620/21.2"	8,500'
75	370/1,510	370/1,450	177 (203.7)	9.0	2,660/21.5"	8,500'
76.3	320/1,520	340/1,490	179 (206.0)	9.7-10	2,700/21.7	8,100'

	cyl#4	cyl # 3	
70	370/1,500	360/1,500	
71.5	360/1,510	360/1,500	Same as above
75	370/1,500	370/1,540	
76.3	340/1,500	330/1,500	

CLIMB CONDITIONS**

	Cyl # 2	Cyl # 1	
FT	350/1,210	340/1,230	2,787' - 5,000'
FT	330/1,180	330/1,190	5,000' - 8,500'

	Cyl # 4	Cyl # 3	
FT	360/1,290	360/1,310	Same as above
FT	360/1,270	360/1.290	

* Mixture leaned until the first cylinder (#2) peaked, then enriched 20 - 30 degrees.
** Full Throttle, Mixture full rich, 120-115 KIAS, > 2,400 rpm, ROC 1,400 FPM - 900 FPM.

90	360/1,310	Same as above
FT	360/1,270	360

Oct. 23. 1997

Dear Richard

It was very nice talking to you this afternoon. yes I agree with you that the kit built airplane and costs are out of reach of so very many that would love to fly and build airplanes for the education and pleasure mind. We don't see many plans for simple airplanes that are affordable to build. Out of the ultra group and available engine there can be some good possibility for light plane design and flying at low costs - this can be one of the challenges for SAA.

Keep in touch - My home phone is 920-233-8014. I still get alot of EAA mail at my EAA office over at the EAA Camp Grounds

Paul.

Dear Richard and Fellow T-18 Enthusiasts:
Here are several ideas I used on my T- 18 and thought they might be of value to our new builders or re-builders.
I consider myself a rather privileged builder/pilot because I knew many of the early builders, such as, B.C. Roemer, builder of the world's fastest T- 18, John Shinn, Lu Sunderland and many of the California T-18 folks. I also had the opportunity to spend many hours with a renowned builder in this region, Bob Dial. Bob gave me many building ideas when I was creating my "Dream Machine" and was a very patient flight instructor when it came time for me to pilot my own T-18.
I spent many fascinating hours next to Bob in my ship, running the T-18 through all sorts of flight conditions. High altitude, aileron rolls, and short field landings were routine afternoon flights. During those flights, Bob would relate many stories of his military combat and GM Corporate flying career and, of course, his many experiences in his own T-18, N 11 BD, which he completed in 1970.

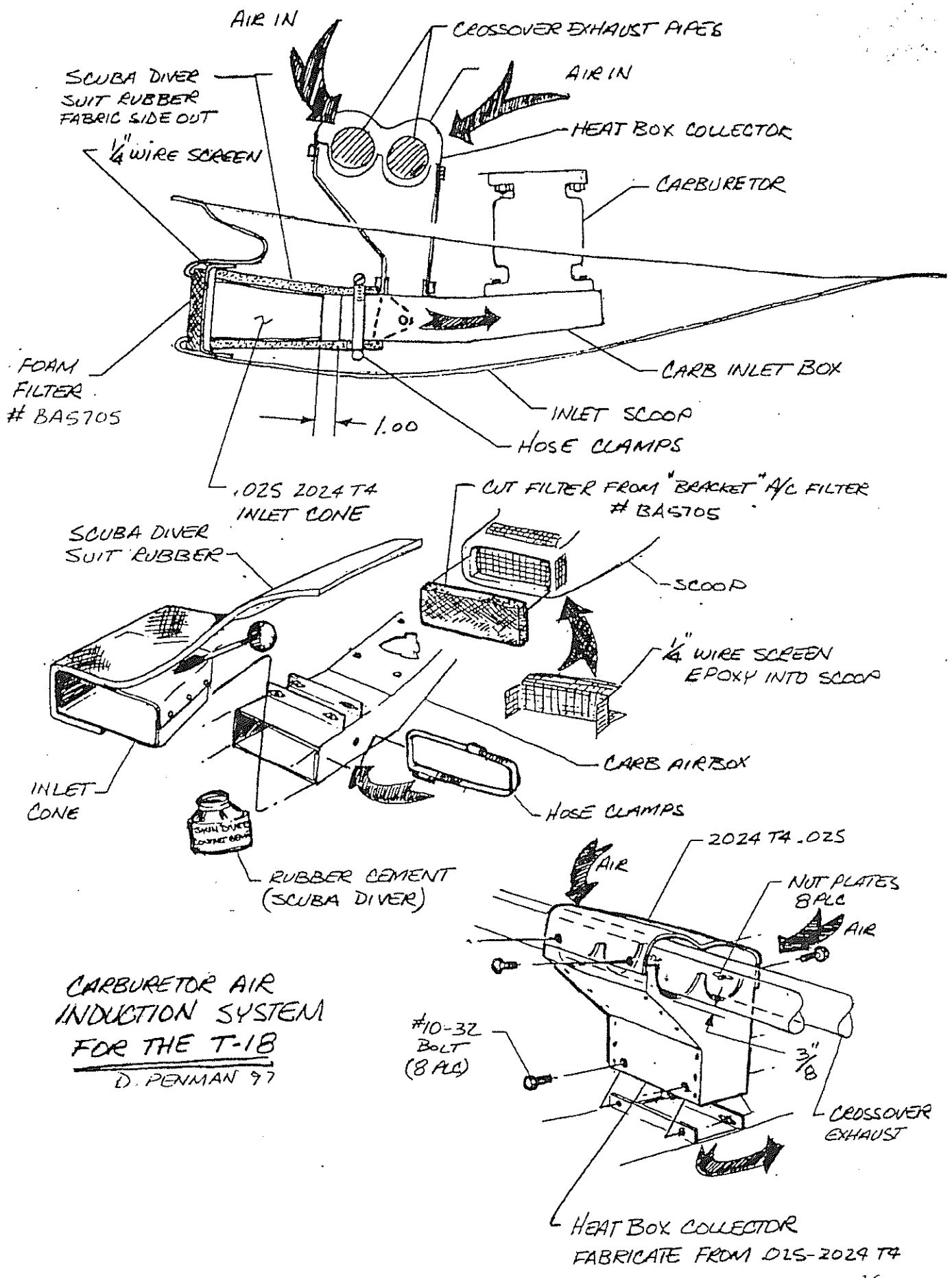
We T-18ers were lucky to have a large number of innovative trail blazers. Incidentally, Bob was one of the first to install a fuel injected engine in a T-18 and his ship was the test bed for all the Sensenich propeller test runs in the early '70's.

In the early 1980's, as new aircraft concepts came on line, such as the Glasair, Long-EZ, and Lancair, many of us thought the T-18 was long past its prime and domed. However, we are finding out that you don't get something for nothing. All these advanced designs make some compromises to achieve performance. If you new folks are thinking about choosing a project, you should look closely at the true performance figures. You will see the T-18 is still near the top. Consider maintenance, take-off and landing distance, visibility, comfort, control balance, crash worthiness and longevity. All have to be part of the equation. TheT-18 is a well balanced compromise having all of these attributes. Think about how many aircraft can cruise at 170 MPH, at 10,000 feet on 8.6gals. per hour and be safely flown in and out of a 2000 foot grass strip.

I've been involved with the T- 18 and associated people for 20+ years now and still find it exciting every time I push in the throttle for take-off or just getting together for lunch with the local T-18 group.

For those who are still thinking about building your T-18, get with it!! Every day you procrastinate, is that much time added to the other end of the project. You can do it!! We all had to take that first step. If you are about to start a new project, I recommend starting with the fuselage. Order the pre-marked skins and get off on the right foot. Some have recommended starting with a smaller part, however, small components can be frustrating and time consuniing to build for the beginner. Remember, it's better to make the components fit the fuselage then it is to try and make a fuselage fit a bunch of components. Besides, building the fuselage gives the builder something to show his fiiends and neighbors, not to mention, something to sit in!!! You need to self motivate, so build in an order of construction that gives you visual motivation. Good Flying!!

Dick Penman
5918 Bordman Rd.
Dryden, MI 48428
(248)628-5075
N199DP
EAA 60368



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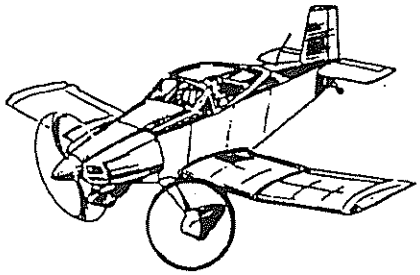

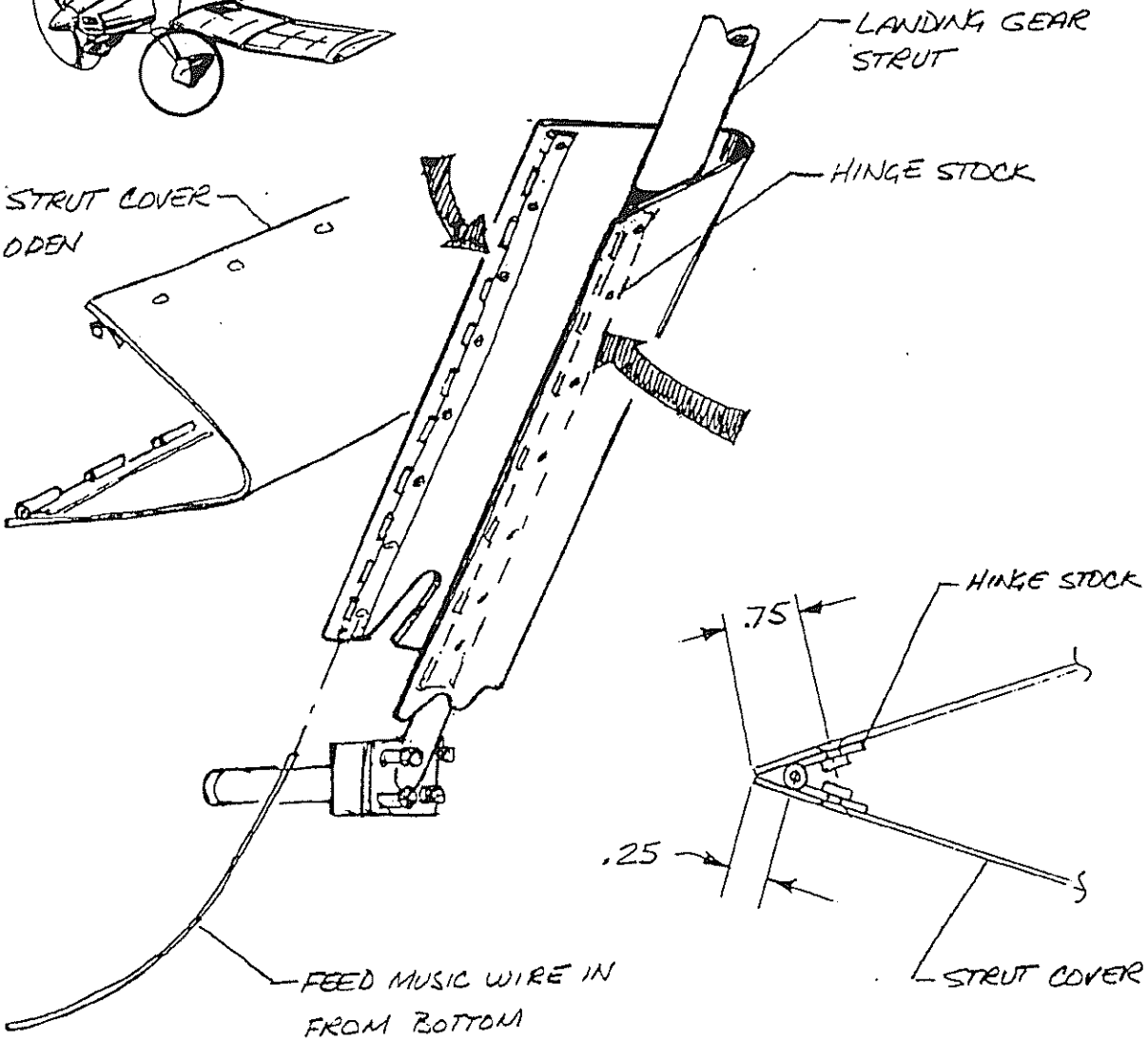

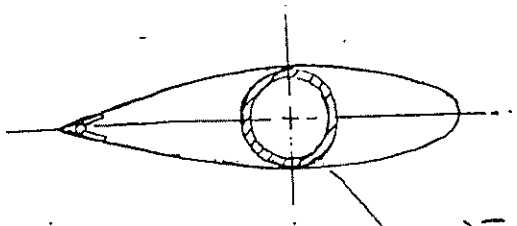

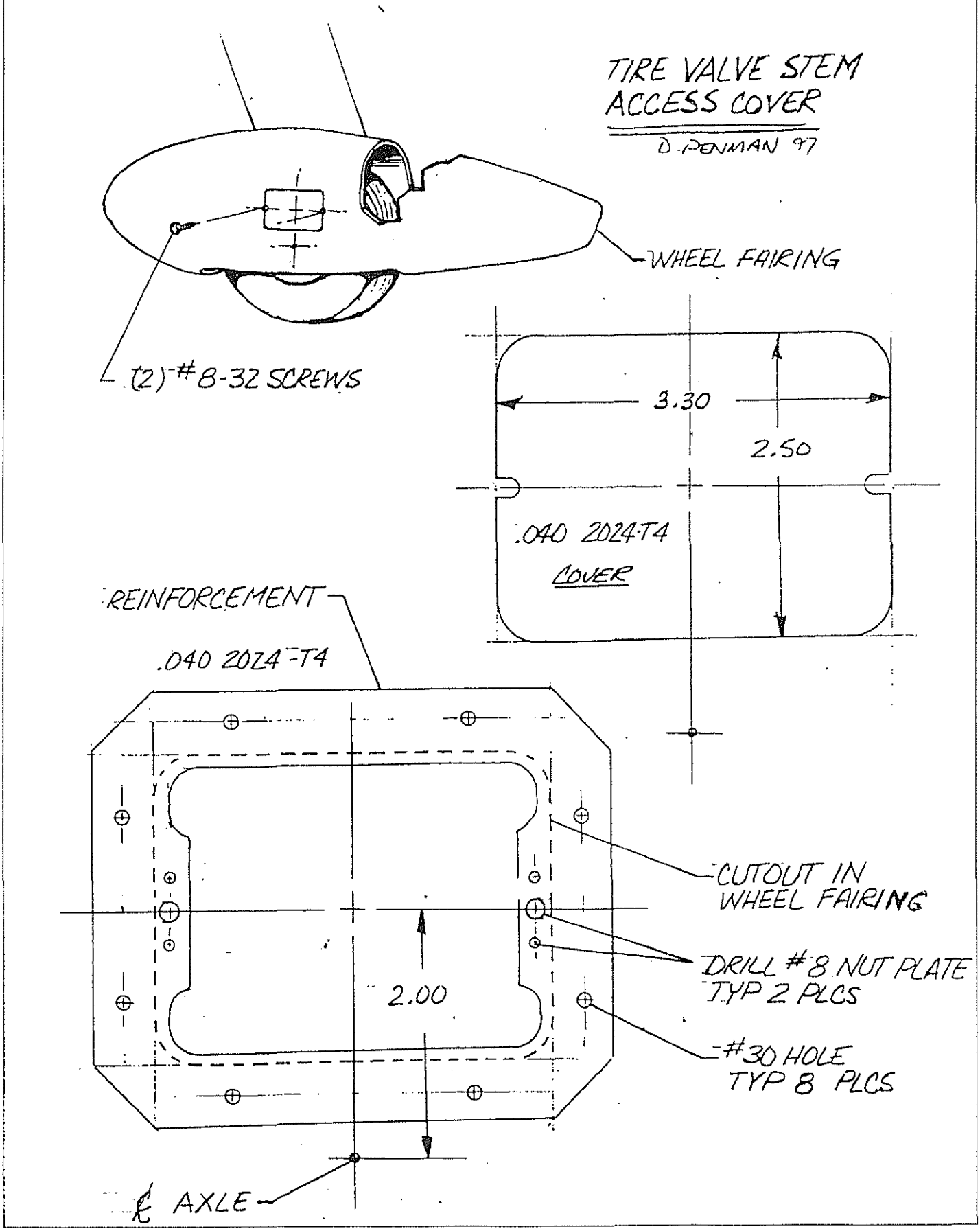
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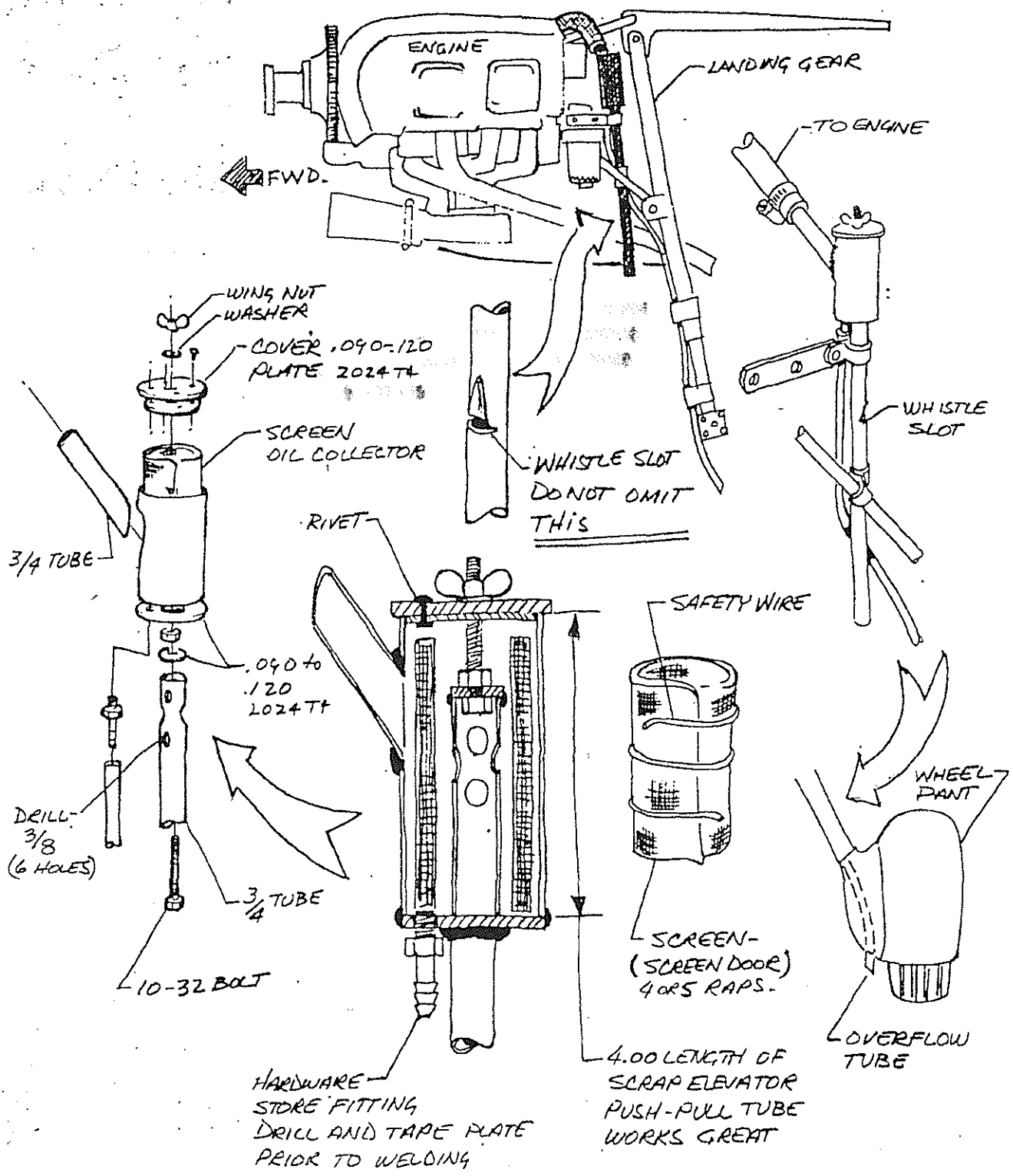

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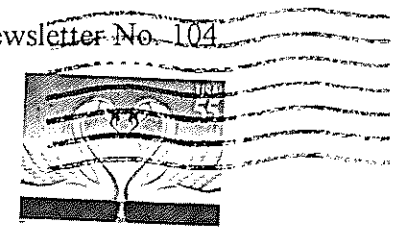

T-18 NEWSLETTER
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Issue #104 Oct 97

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