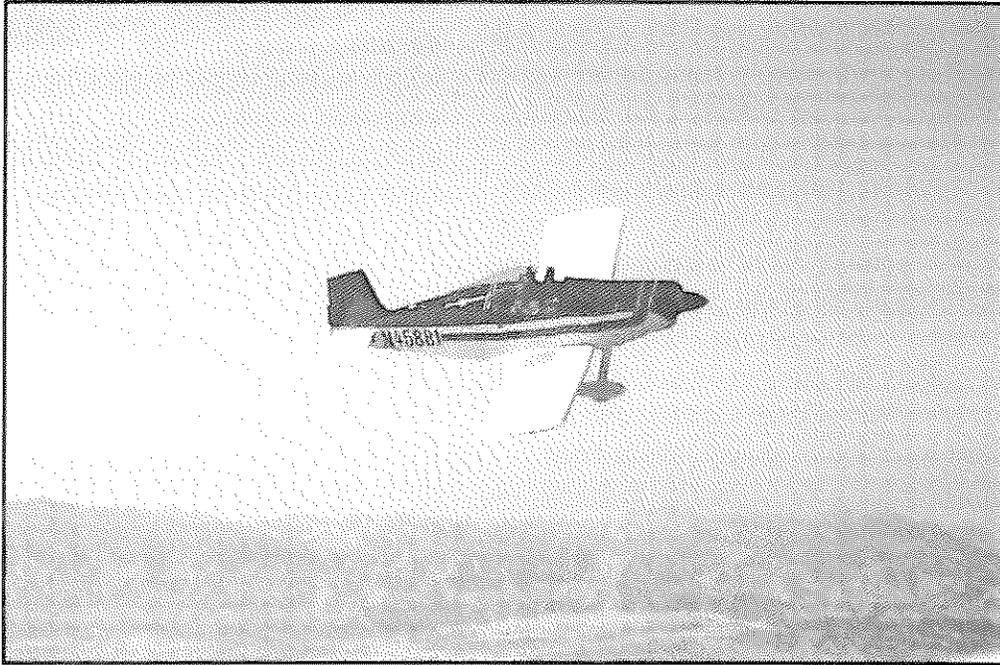


# T-18 Newsletter

July 2001



N45581 ~ Jim Alfonso ~ Los Angeles,CA

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*NOTICE: (STANDARD DISCLAIMER) As always , in the past, present, and future newsletters, we would like to make you aware that this newsletter is only presented as a clearing house for ideas and opinions, or personal experiences and that anyone using these ideas, opinions, or experiences, do so at their own discretion and risk. Therefore, no responsibility or liability is expressed or implied and is without recourse against anyone.*

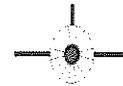
T-18.Net Website Update**Editors Notes**

By: Roy Farris

I want to thank those of you that submitted pictures and articles for this newsletter issue. It is very difficult for me to keep coming up with good information for these newsletters. I am enjoying the task immensely, but it sure helps when I receive information from you. I really appreciate it.

I have been getting lots of telephone calls and emails from people that visited the T-18 website. The T-18 seems to be regaining some popularity. I am encouraged by the number of calls I am receiving. The T-18 is truly a great airplane and deserves all the attention it can get. I have been asked by these new contacts, and by many of you, why our "manufacturers" don't seem to promote the airplane. I can't answer that question. Usually the website is the only place that these possible Thorp builders have found, and up until that time, didn't even know that the T-18 existed. We don't really have a manufacturer, like the well known RV series of kit aircraft, but we do have two completely separate companies that are involved in the Thorp movement. Eklund Engineering, located in Lockeford, CA., who is actively working to create a T-18 kit, and Classic Sport Aircraft, located in Springville, CA., who already markets the S-18 in kit form, and handles most T-18 piece parts as well. I think we all agree that there is great potential for the T/S-18, and that some good leadership is needed. We as builders and pilots can only do so much, we need strong leadership from those who have the means and the ability to do so. Dick VanGrunsven of RV fame has shown what a good airplane and great marketing can do. We too have a great airplane, just think how some initiative and really great marketing could change the way the world sees the Thorp T/S-18. It's Time To Get With It !!

For those of you who have computers, I mentioned in the last issue that I was getting ready to offer the Newsletter as a down loadable file from the website. Well that is now a reality, and there are already several members that have signed up. Currently, this issue and Newsletter# 115 are available for download from the website. The really neat feature of the web version, is that all of the photographs are in color, and the detail is much better. If you are interested in gaining access to the "Newsletter" section, please visit the website at: [www.t18.net](http://www.t18.net) for details. There is no additional cost involved.

A Message

As many of you know I have decided to sell my S-18. So I recently decided to re-subscribe to Trade-A-Plane...and...."WOW"..... experimental airplanes are outrageous now !!!!!!! A loaded ultra-lite is over twenty thousand dollars !?!? I've seen RV6's for as much as one hundred and fifteen thousand !!! We as a classic, nicely built, cruiser, aerobatic airplane "MUST" start holding our prices higher than we have in the past. I mean, everything else has went up, so why not our great airplane !?! There is nothing out there that I have seen that's even close to comparison to our T & S-18's that not sky high, so to speak !!! Don't you guys agree ? There should be a law some where that states that you can't sell your Thorp for under thirty thousand dollars at the least. Something that we should start thinking about..... whewwww..... my head is still spending \$\$\$\$ signs ! Just a little note to our great members here, and for what its worth !

Danny Cummings  
S-18 118CK

One Members StoryStory Cont.

I have a story about the construction of my T-18. It took about four and a half years of work to complete. The story starts like this.

My project was a Thorp T-18. Doctor Bill Baker and I were partners on the project. We purchased it from our friend Jim Rice who had the project for some time. He had many parts and tools and the kit was very complete. Some parts were already made and the workmanship was very good. Several people had owned this kit. Two men from Southern California used pop rivets to constructed the fuselage. That was the method John Thorp used. Then they sold it. The second owner drilled out the pop rivets and then used flush rivets. They also did the modifications to the fuselage that were required. The third owner built the outboard wings and the tail feathers. The forth tried to build the center section and when they tried to install the wing skin they got it on upside down and miss drilled the wing spar. Jim bought the T-18 at this time and then stored part of it in his garage and the rest of it in his hanger.

At this time I was helping Larry Graves build his Glasair II. Larry, Doc, Loyde Foster and myself saw the T-18 fuselage in Jim's hanger. We looked it over and thought it was well built. But we were in the middle of Larry's Glasair project and I did not think that I wanted a project of my own at this time. I was working on the Glasair, building a new truck kit that I had bought from Peterbuilt, and taking flying lessons. Also at this time my wife April and I were having our 25th wedding anniversary and we went to Australia with our two sons for about a month. This was a pretty busy time. Well, we were back from Australia and I finished the truck. Larry, Loyde, and I finished the Glasair and things really slowed down. In the fall I bought another truck kit and finished it in the spring.

About this time, Doc said, "In your spare time, why don't you and I buy Jim Rices T-18 project and get Loyde to help us build it?"

"We could have a project at home." So I said "Why not." We bought the T-18 in July 1994 and the work started in September or October. At first the construction was slow because it was cold. Doc bought a space heater for the hanger and that helped a lot. Soon we had nicknames. Awk was hung on Doc, oh oh on me, and ok Loyde on Loyde. Awk got his handle because that is what I said when he built a part that did not fit. Oh oh was my handle. I got it from Doc. That is what he said when I built a part that did not fit. Loyde got his handle, OK Loyde, because that is what Doc and I said when Loyde showed us how to do it right. So ended 1994.

The winter of 1994-95 was cold. We had a lot of the wing built by February. One night an eight-foot overhead light broke a supporting chain and the light fell on the wing. It did some damage to the wing skin and bent the trailing edge. Two nights later the other eight-foot light broke its chain and fell on the fuselage. I wondered what the odds were? We finished the wings, flaps and ailerons by March. Then we went to Montague and loaded the fuselage on a trailer. We brought it to Mott airport. This trip was uneventful for us. Not like when Larry and I went to Arlington to get his Glasair fuselage. On the way back we stopped for gas. A service station attendant asked us, "Are you going fishing in that there boat." pointing at the inverted fuselage on the trailer. From March to September we built the T-18s rudder peddles, cables for the elevators, flap handle and cables, pulleys, engine mounts, instrument panel, baggage compartment, battery holder, rear bulkhead, wheel, brake, and leg fairings. This ended 1995.

1996. By April, we hung the engine, fitted the cowling, built the engine baffling and the seats. In the fall we started on the airplane again. It took a couple of months to build the canopy. The canopy has an interesting story. A builder saw it in the back of a pickup. The pickup was full of trash and headed to the dump. The builder asked the driver,

cont next pg.

Story Cont.

“Watcha gonna do with that thing?” The driver said, “That is a canopy for a T-18. A bunch of 2x6s fell on it and ruined it. I’m taking it to the dump.” The builder bought it for a hundred bucks. Doc polished the nicks, dents, and scratches out and it looks as good as new. This ended 1996.

1997 By spring the wheel pants, landing gear fairings, air scoop, air induction, and air filter were built. Each summer I had to go to work to buy airplane parts, and food. Always something to interfere with airplane building. In the fall of 1997 we built the wiring harness, battery cables, elt, elt antenna, com antenna, strobe lights, wing wired for landing and ID lights. I installed the landing lights in the wings, cut the cowl for the exhaust pipes and finished the fiberglass parts. I then hooked up the plumbing in the engine compartment, oil and fuel lines, air filter, seals, and electrical connections. At the end of the year John Herlihy and I rebuilt the engine. A 160hp 0-320 E2D. Are you tired of airplane building yet? This ended 1997.

1998 By January the airplane had been assembled and made to fit together properly. Then it was disassembled. Every part. Loyde would send Doc to fly-ins to take pictures of induction scoops, flap fairings, exhaust systems, instrument panels, wing fairings or something. Those are the hard things to interpret off of the blue print. Some of these thing they just don’t tell you how to make. Doc would go and bring back the most beautiful pictures of red, blue, green, yellow, white or gray airplanes. The pictures did not help so much in construction, but they really helped in determining the paint scheme. By taking the best of each paint scheme, I eventually came up with my paint design. Doc wanted day glow florescent division of highway orange paint. I wanted dark blue with white stars and battle stripes. So red it was. Red Red Red. Bright Red.

One day I was painting an outer wing panel that beautiful red.

cont.

Story Cont.

Three mosquitos were buzzing around my head. The last coat of that beautiful red had been sprayed on. A supper gloss. No runs. No orange peel, it was perfect. Out of the corner of my eye I caught sight of the three mosquitos. They were flying in perfect formation. The wing mosquitos were in perfect formation. The three gained a little altitude, and turned in slow formation, nosed over on a pretty steep angle, and gained speed. Splat, splat, splat. Into that fresh red paint they went. There little bodies are still entombed in that beautiful red paint. I’ll show them to you some time if you like.

The T-18 was painted in front of the hanger and of course there was a little red overspray on the pavement. When the airplane was painted and assembled I took a picture of it in front of the hanger and sent it to the FAA to show I was ready for final inspection. The inspector wrote back and asked if the deer was killed and was there any damage to the airplane. When the FAA signed the papers, I had a real airplane. WHOOPY HOORAY HOORAY From a bunch of parts to a machine that will fly. What a thrill. I taxi tested the T-18 to the end of the runway and back. I parked it in front of the hanger. My heart still pounding. My knees still shaking. This was all of the thrill I could stand for one day. I put it in the hanger for fear I would damage it.

The next day, Harry McNulty and I went to Siskiyou County airport to watch or to help in the test runs of Mike Hansons Verieze. A rock or something got stuck between the tire and the wheel pant. The tire blew at about 70 mph. John Herlihy brought the Verieze to a straight stop on the runway. Remember the old saying, “Take your pants off when you test fly.” I went home and took off my pants. Guess what? Both tires rubbed inside the wheel pants. I had built the wheel pants around run out tires. Even with a half inch of clearance, the new tires were still to big and rubbed the insides of the wheel pants. John Herlihy did the first test flight.

cont next pg.

Story Cont.

After a few taxi tests and a complete check out, the T-18 was ready for the first test flight. John taxied to the north end of the runway. We could hear the engine rev up. The rpm drop as the mags were checked. A slight pause then full power. It began to move. Ever faster. The tail came up, then it was airborne. Wings level and climbing steadily. Hope, fear, joy, sadness, all at once. A huge knot in my stomach. How do you describe an emotional high, and at the same time an emotional low. What a beautiful sight as it climbed into the bright blue sky. It flew. It really flew. John flew around the airport taking caution not to go to far out. Over the radio he reported rpm, speed, temperatures, and pressures. He also reported the handling conditions and the stall characteristics. Two sending units and a trim tab took care of most of the problems.

I had never been around a tail dragger nor flown one. John took on the job to teach me to fly a Citabria and what a job it was. Right rudder, right rudder, right rudder. Right rudder is all I ever heard. Every time John would yell, even if I couldn't tell exactly what he said, I would stuff in a whole bunch of right rudder. I don't know if that is what he wanted but it seemed to take care of whatever the emergency was. After 60 or 70 landings I started to get the hang of it. A Citabria is a fun airplane.

Then came the checkout in the T-18. John and I got in the cockpit and were tighter than sardines in a tin can. We fired up the engine and taxied to the north end of Mott field. Checklist OK. Advance the throttle. Roar, zoom, speed, airborne. Heart pounding, hands shaking, we were flying. We cleared the end of runway then a voice. On the radio a voice. "AH that little red airplane that just took off———AH can you hear me? ... pause ...that little red airplane that just took off, a wheel fell off." From skyhigh to bottomless pit in less than 5 seconds. We flew in silence for a few moments. Then John says in a matter of fact voice,

cont.

Story Cont.

"When we land we're going to bend it." I could see that we could be in real trouble. But having faith in Johns flying ability I said, "Do the best you can." Another moment of silence. Then John said in a happier tone, "We're full of gas, why don't we go fly for a while and have a little fun before we land?" It seemed like the thing to do, so we did. When we returned to the airport, Harry McNulty had heard of our problem. Harry called us on his handheld radio and said if we could do a slow fly-by he could check the tire situation. On our slow pass, Harry reported that the hard rubber tire on the tail wheel had come off. This was not nearly as serious as losing a main gear tire and wheel. We had a normal but a very noisy landing. I do not recommend aluminum tires.

People come to look at the airplane. They want to know how fast it is, how much it cost, and who built it. I tell them, "It goes really fast, costs alot, and was built by a doctor and a truck driver." They leap away as if it were going to fall on them. There is a saying that if you build an airplane it will cost you a spouse and two friends. Doc contributed a wife and a friend. And I a friend.

A special thanks to Larry Graves, Loyde Foster, Dr. Bill Baker, John Herlihy, Harry McNulty and all of the other people who made this airplane a success. I have a very special thank you for my wife April, for putting up with me during the construction of 118 Delta Tango or is it T-18 Doctor-Trucker?

I fly my little red airplane as often as possible. It is an uplifting thrill every time. I can not think of any thing more fun than building your own airplane and then get to fly it too.

Happy flying to all of you.

Jerry Denham  
1331 Torry Road  
Mount Shasta, Cal 96067  
N118 DT

## Runway Incursion/Excursion

By: TomWorth ~ Edgewood,WA

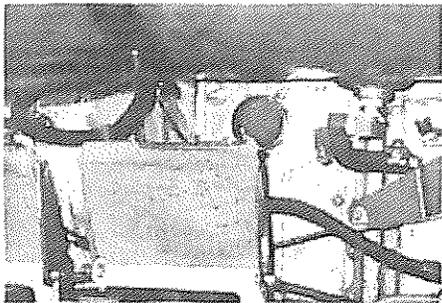
Following the Paso Robles gathering, Larry Lipovsky and I followed Howard and Elaine Ginn towards Phoenix. Howard had planned a fuel stop at a smaller field where we would separate. They were headed for home at Camp Verde (N7E) and we were going to Glendale (GEU) near Phoenix.

As the FAA counsels, an *incursion* is frowned upon for entering a runway. An *excursion* is when one departs the runway and has been the subject of several NL articles. Many reasons (read excuses) can be provided for either situation, but sometimes a review can help others to avoid a similar fate.

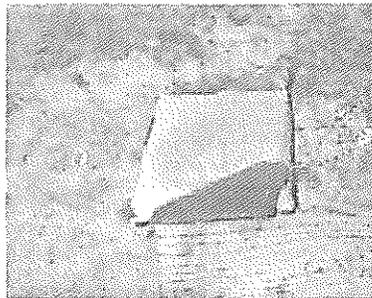
Following Howard into the small field (name not mentioned to protect the guilty), I found I was too high and perhaps too close to the preceding plane. In doing a go around, a full pattern was not made .. just a circle. Perhaps not having a “stabilized” approach contributed to the ensuing *excursion*. As I touched down and started to apply brakes, my right foot slipped off the rudder pedal. To make the experience more exciting, my kneepad slipped down to my ankle (wearing shorts may have contributed). Please note that this plane has rudder cables down the side, so there is no center tunnel (my “fix” would not apply in that case). Since braking was then only being done with the left foot, the *excursion* began. I overran one runway edge marker, but with extreme good fortune it was just inside the left wheel fairing and missed all of the bottom antennae. The marker bent over just aft of the cockpit and other than the dent, there was no damage to the stabilator or tail wheel. Upon regaining my foot on the right rudder pedal brake, I was able to return to the runway centerline without a ground loop.

After discarding the incompetence thought (only put a scratch on one other plane in over 40 years), I searched for better reasons. One that came up was that the rudder pedal foot plate tapers to the top and a previous owner had added a 1" pad of a dense foam. Perhaps he had read the NL about “bare feet” and always wore moccasins. Since I’m short legged, that extra pad seemed OK (a NL mentioned a wood pad too). Howard said footwear can matter and maybe contributed as I was wearing a 9W instead of my usual 9M.

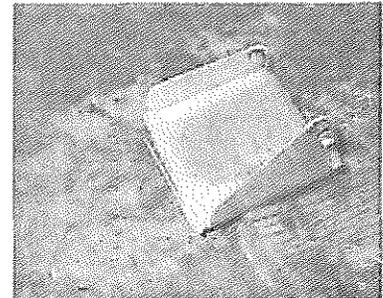
Refer to the photos of the old pedal and the revised pedal that Mike Archer made for me. I have reused the foam pad, but the higher edge on the right side of the plate at the top should inhibit any future case of my foot sliding off when braking. I’d just as soon not have another such *excursion*! Perhaps an offset stick that better centers between the legs would be helpful. There wasn’t a significant amount of wind (that might have caused me to tilt the stick to the right and shoved my leg to cause the foot going astray).



Tom's Brake Pedal  
Before Modification



Standard Brake Pedal  
Note the right side.



Modified Pedal ~ Note the  
right side. Pedal provided by:  
Classic Sport Aircraft

**T-18 Flap Kits**

Now Available From Eklund Engineering  
(209)727-0318 or email: thorpt18@jps.net



## 632 Flap Kits

Left Assembly

Quantity	P/N	Description	Price
1	632L-1	Left Flap Skin	\$528.00
5	632L-2	Stiffener - Upper	included
5	632L-3	Stiffener - Lower	included
1	636	Beam	included
1	634L-1	Rib - Left Inboard	\$25.50
1	634L-2	Hinge	?
1	635L-1	Rib - Left Outboard	\$21.50
1	635L-2	Hinge	?
1	662L-1	Nose Rib - Left	\$18.50
1	662L-2	Plate	?
1	638	Mast	?
		Crate Charge	\$12.00
		<u>Price to date 6/03/01</u>	<u>\$605.50</u>

Right Assembly

1	632R-1	Right Flap Skin	\$528.00
5	632R-2	Stiffener - Upper	included
5	632R-3	Stiffener - Lower	included
1	636	Beam	included
1	634R-1	Rib - Right Inboard	\$25.50
1	634R-2	Hinge	?
1	635R-1	Rib - Right Outboard	\$21.50
1	635R-2	Hinge	?
1	662R-1	Nose Rib - Right	\$18.50
1	662R-2	Plate	?
1	638	Mast	?
		Crate Charge	\$12.00
		<u>Price to date 6/03/01</u>	<u>\$605.50</u>

The above parts with prices indicated are currently available with 50% down and the balance prior to shipping. We hope to have the remaining parts available by Oshkosh 2001. Delivery in 45 days is guaranteed or refund available in full. Shipping and 7.5% sales tax (sales tax, Calif. only) additional.

## Installing The NavAids Wing Leveler

I need some suggestions on where and how to mount the NavAids Devices autopilot/wing leveler. I know I have flown in some Thorps that have had one installed. How'd you guys mount the servo so that it did not interfere with the walking beam or aileron push rods?

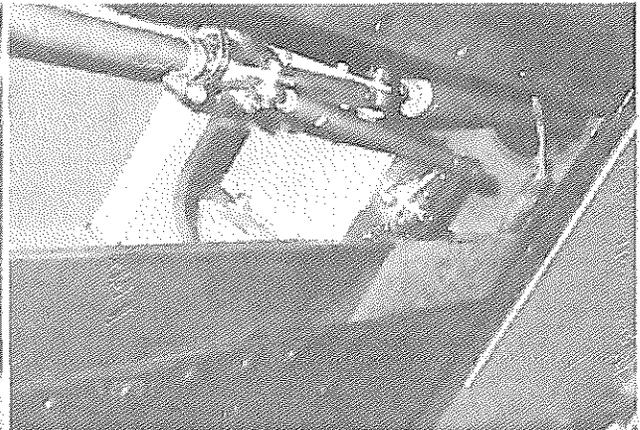
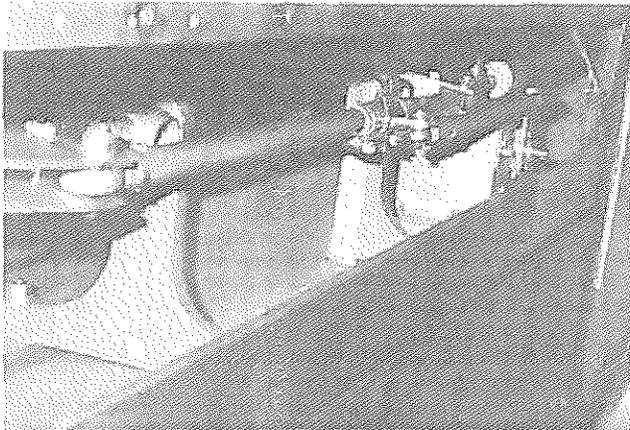
Gary Green



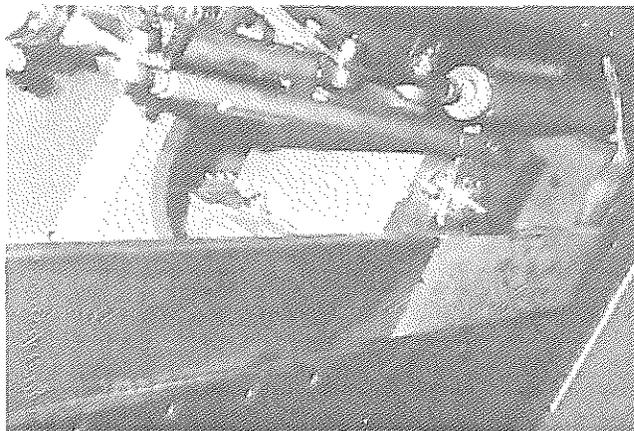
I mounted the servo under the passenger seat, drilled a hole through the bulkhead for the shaft and then reattached the servo arm. The servo arm is then clamped to the interconnect tube of the aileron control. I mounted the servo itself on a piece of plywood bolted to the floor picking up the flange of the rear wing opening bulkhead and the flange of the lower tunnel. I don't have plans in front of me so I can't identify the part numbers.

This autopilot works great, mine tracks the GPS or the VOR. Wouldn't leave home without it.

William Beswick

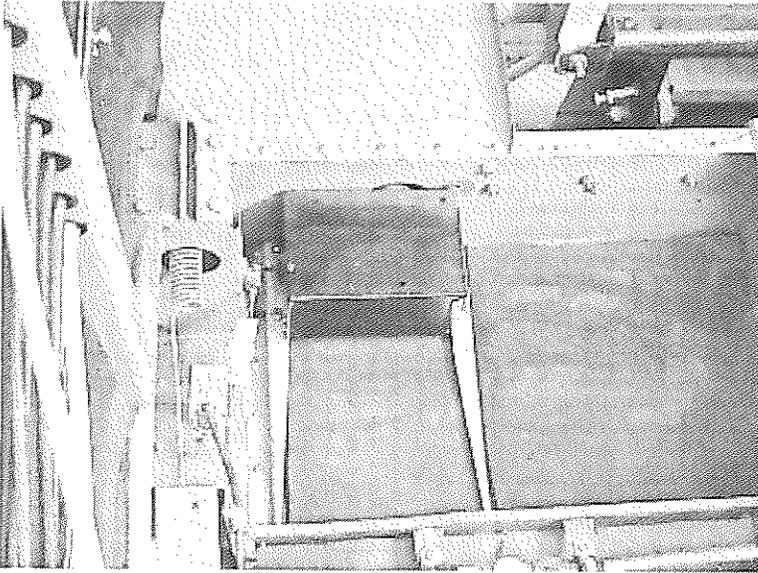


Notice the servo is bolted to the rear of the main spar. The actuating linkage is clamped to the walking beam cross tube using stainless steel hose clamps.



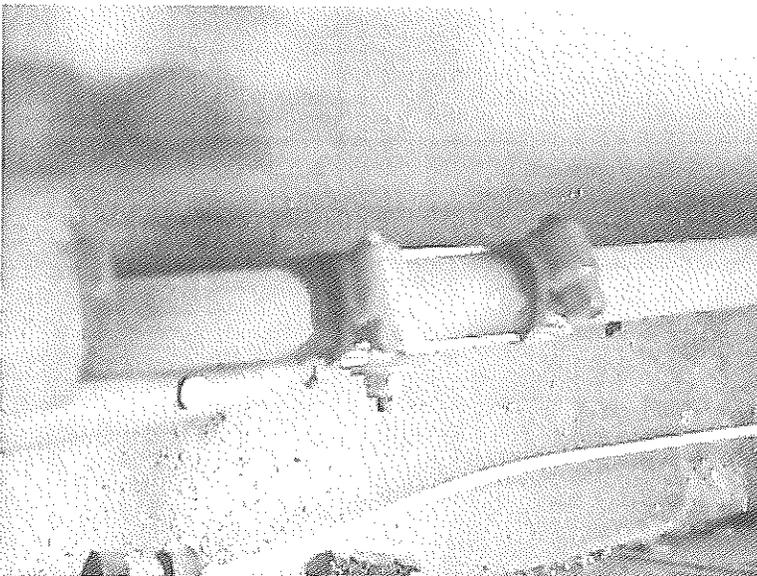
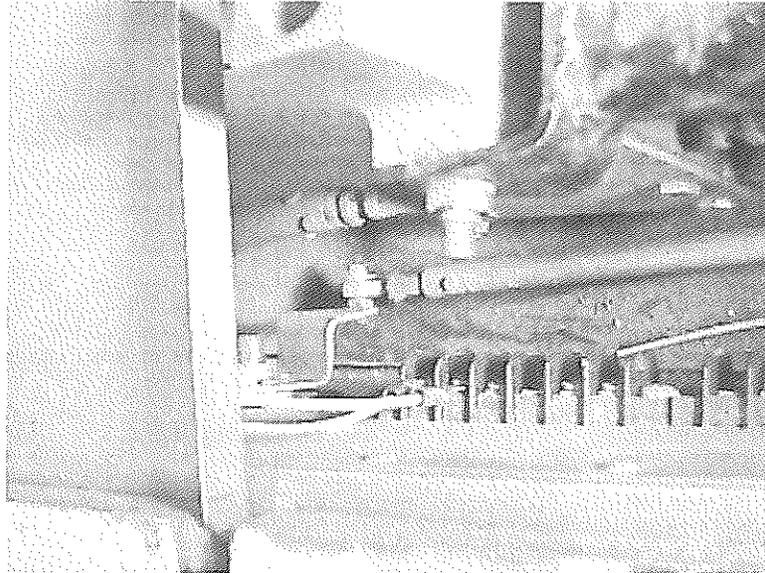
These pictures were submitted by Tom Worth. They are of the NavAids Autopilot installation in 295RS, done by Richard Snelson when he owned the airplane. Looks like a nice, simple installation. Other installations have mounted the servo under the pilot/passenger seat and cut a hole in the -592 frame to gain access to the walking beam assembly. Reference the installation on the next page. Both installations seem to work equally well. Please reference the wiring diagram on page 10.

## Installing Navaid's Wing Leveler



This installation has the control servo mounted under the pilots seat, with the control arm exiting forward through a hole in the -592 frame. You can see the walking beam in the upper right corner of the photo.

Here you can see the control arm from the control servo, and the control linkage that is used to connect the servo to the walking beam.

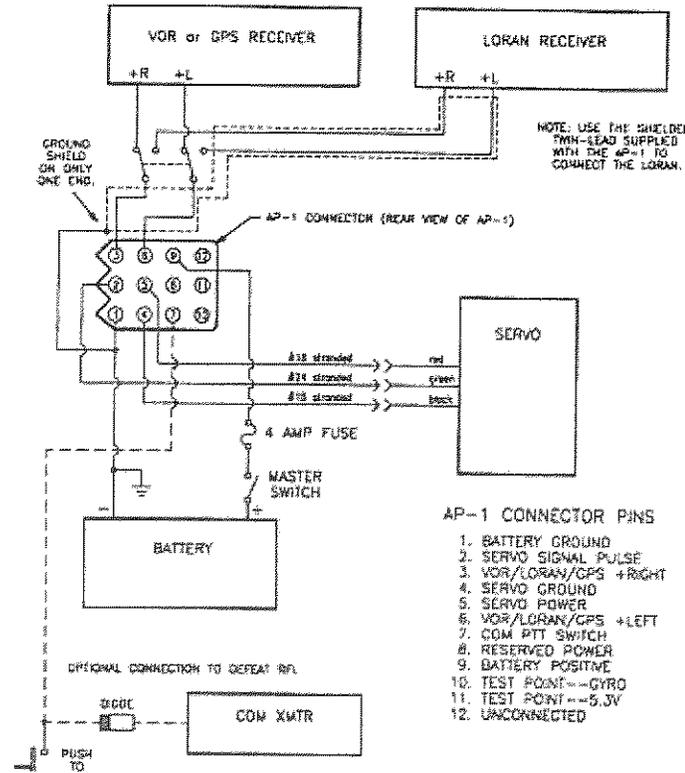


Here you can see the bracket and stainless steel hose clamps used to attach the control linkage from the servo to the walking beam.

I am not sure who's installation this is. I received the photo's by email and was unable to determine who sent it.  
SORRY

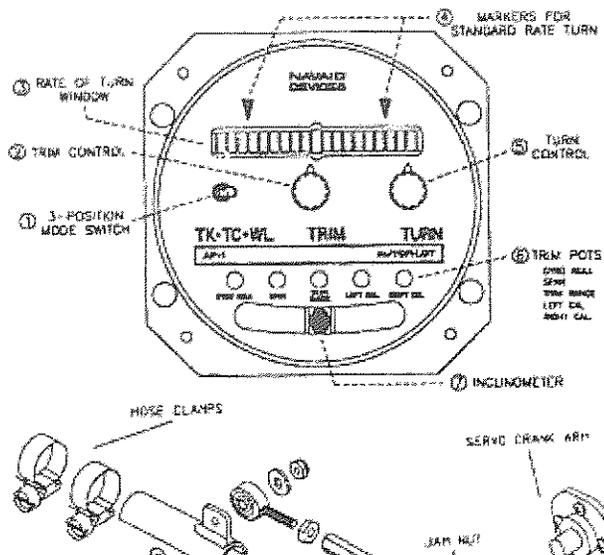
## More on Installing the Navaid's Wing Leveler

Submitted by: Frank Roncelli



## -1 AUTOPILOT AND S-2 SERVO

NAVAID DEVICES, INC  
 641 North Market Str  
 Chattanooga, TN 374  
 Phone: (423) 267-3311  
 FAX: (423) 756-6154



## McAlester Fly-In

By: Gary Green

The McAlester gathering went pretty well. I thought we should have had more Thorps there though. Only 14 showed up. I don't think the weather was actually bad enough to keep a lot of them from attending, but the forecasters probably spooked them by painting an overly pessimistic picture. Bob Highley, Bill Williams and Jim Grahn came from Florida, Steve Hawley came from Tucson, Jerry Sheets came from N. Carolina (Jim Paine was with Jerry and was looking and feeling well), Bob Wood came from Houston, Tim Mason from Illinois, Gary Cotner from Tulsa, Doug Frantz and Larry Eversmeyer from Ok City, Wendell Green, Ken Morgan, Damon Berry and I from Texas.

Once again, the folks at McAlester went all out to treat us great. The old FSS facility is still empty and available for groups like us to use. It is air conditioned, has plenty of comfortable chairs and folding tables. It even has a TV set up for the aviation weather channel. Maxine and I flew up in a four ship with the Berrys, Ken Morgan and Steve Hawley. (Steve came in Thurs. evening and spent the nite with the Morgans). We arrived shortly after noon on Friday but there was not much setting up to be done. Just set up the folding tables and arrange the chairs, get some cold drinks and beer on ice. Maxine had bought several pre-cooked briskets which had been sliced then frozen. We put them in an ice chest and strapped it in Steve Hawley's empty right seat to haul it to McAlester. We had a "strerno" heating pan, aluminum serving trays, and other items filling up the baggage bins in each of our planes. The FBO had an empty freezer compartment in their refrigerator, so we put the meat in there for the night. It was too easy! We all went out to "Pete's" in Krebs to eat on Friday nite. That's a famous Italian place and the family style food was excellent and plentiful. The local Ford dealer loaned us a large van to use, and several of the attendees drove in, so we had plenty of transportation.

Saturday was a beautiful day, light breeze out of the north, puffy clouds to play around. Ya shoulda been there. The McAlester EAA chapter set up a big grill and served hamburgers, hot dogs with all the trimmings, and cold drinks at noon. That worked out great for all concerned. Those guys could not have been nicer to us. They even gave us all free chapter caps. They had a bucket out for donations and I certainly hope our folks were generous. We did lots of flying on Saturday. I think our largest formation was the 6-ship finale just before we gave up for the evening. While I was out playing with the guys, Maxine, Susan Highley, Debbie Williams and some of the other wives got their grocery list together and went to town. They set up the evening meal for us. They had a propane burner and large pot to boil corn, heated the brisket in ovens then kept it hot on the charcoal cooker, had baked beans, hot rolls, etc. That turned out to be a great evening meal. The brisket was a real hit. It was much easier to prepare and have ready to serve everyone at the same time than hamburgers or steaks. Plus, you don't have to mess with all the sliced onions, pickles, tomatoes, lettuce, mustard, ketchup, buns, etc. We put all of our airplanes in the big hangar and had lots of room left over. We could easily have hangared 25 airplanes. Phil Brenner is the FBO there and his crew really go out of their way to accommodate us. Leroy Holt, Leroy Conner, and all of the McAlester EAA Chapter 1213 guys earned our appreciation for helping make it a fun weekend for all of us.

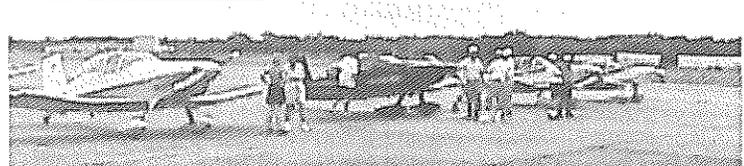
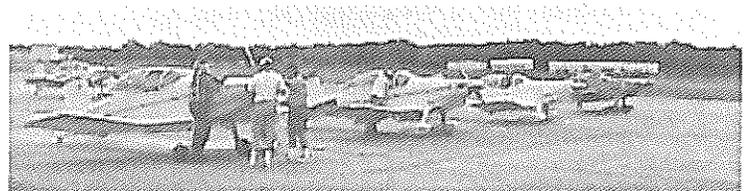
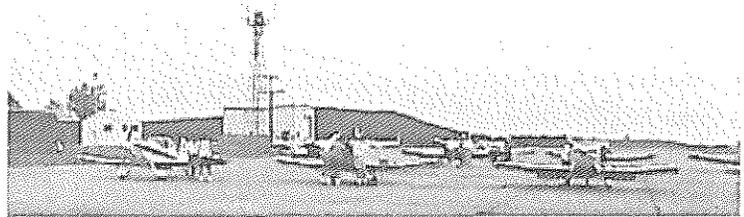
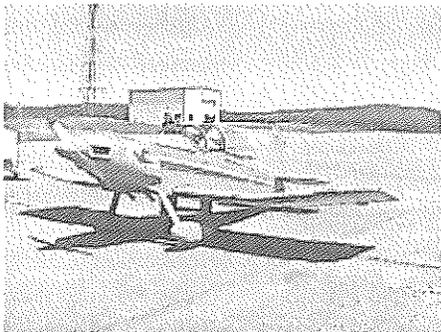
Sunday morning dawned with a line of thunderstorms rolling through eastern Oklahoma. But by the time we had finished breakfast, they had moved through. Some of the folks heading southeast may have had some delays in getting home. Our four ship headed back toward Texas about 11 am but didn't get too far. We landed at Atoka, which is just about 30 miles down the road from McAlester, to wait for about an hour or so. By then the clouds were breaking up and we arrived at Pecan Plantation to find clear skies. Steve Hawley gassed up and headed west for Tucson, expecting to get there before dark. I don't know what

cont.

cont pg. 12

McAlester Cont.

more we could do to make it a pleasant Thorp gathering. The sponsorship of the EAA chapter provides us with free insurance coverage. The air conditioned building is wonderful. The plentiful hangar space is comforting. The ramp is spacious, the runway is long, the airspace is all ours. The motel left lots to be desired, but that is easily corrected. The Ramada ain't the only motel in town. It used to be a Holidome and used to be clean. When we get together at Kentucky Dam, we'll discuss where to have the next Spring Thorp gathering. I hope all of the newsletter readers will give it some thought. I like McAlester! But, I also like Canyon City. I am certain there are other locations worthy of consideration. Maybe we just need to have more gatherings.



These photo's were supplied by Tim Mason. Sorry he didn't get any names to go with them, but it sure looks like everyone is having a good time.

## T-18s @ SUN-N-FUN

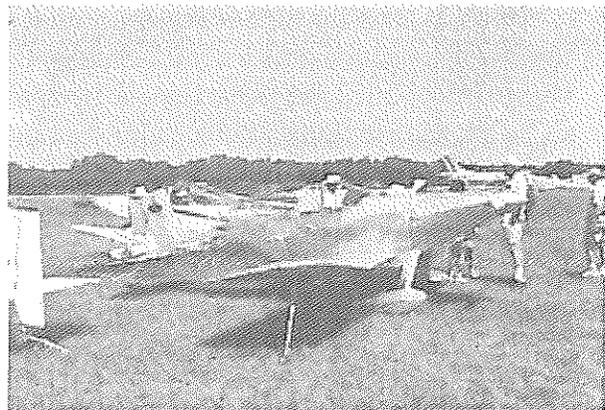
By: Robert Jaeger

For the past few years the main get together of T-18ers at Sun N Fun was the excellent steak dinner prepared by fellow T-18er, Bill Williams and staff and this year was no exception. Comfortable evening weather allowed for 52 hungry Thorp enthusiasts to enjoy the fine cuisine and fellowship. A little liquid lubrication prior to the dinner put everyone at ease and contributed to the relaxed gathering. After dessert of rich cheesecake introductions were made by all the attendees including one T-18er from England which truly made our dinner an international event. Plans and dates for future T-18 events for 2001 were discussed and set. The award for the Best T-18 at this year's Sun N Fun was presented to Howard Ginn, of Camp Verde, AZ, for his nicely polished Thorp, N22DH. Howard and his wife, Elaine, who flies her own T-18, also have two sons with Thorps. Let's see an RV'er top that! Dusk drew the cheerful dinner to a close with everyone leaving well fed and delighted with new and renewed friendships. Completing the evening with a bang, somehow Bill used his influence to put on an evening airshow of various aircraft and pyrotechnics. Of course, nice folks that we T-18'ers are, we also let the rest of the Sun & Fun crowd watch. By an overwhelming vote it was decided to continue with the T-18 evening dinner again at next years Sun N Fun.

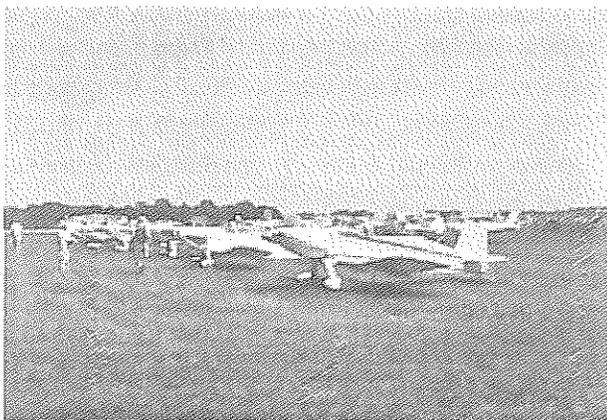
Thanks Bill, from all of us for your efforts in making our T-18 dinner a class affair.



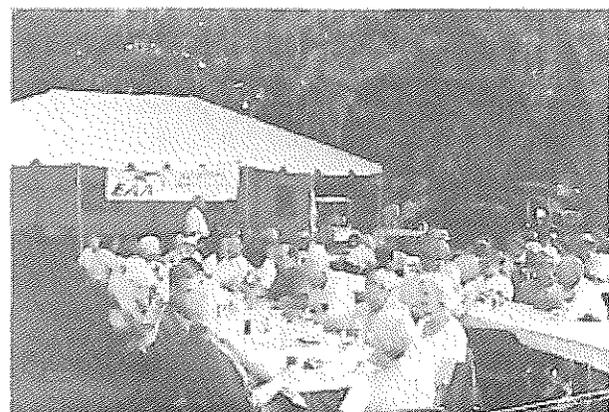
Best T-18 Award Went To Howard Ginn



Howard Ginn's Award Winner



T-18 Lineup



Evening Festivities

## Technical Tips

### Excessive Horizontal Tail Movement

I am John Kempkey, the current owner/pilot of 118EK. I have been flying this Thorp for the past 10 years and have found it to be a real pleasure. 118 EK was built by my father Ed Kempkey and first flew in 1974. Unfortunately, my father passed away in 1989, so my relationship to this plane is extra special.

In most all respects 118EK is strictly a John Thorp plan built airplane, with any minor deviations approved by John Thorp. In fact I remember visiting Mr. Thorp with my dad at his shop in LA and then later when he moved to Lockford. I was always impressed with my father's awe and respect for Mr. Thorp's knowledge. My father, consulted with him frequently during the building of 118EK and believed he was in a league of his own as an aeronautical engineer.

Anyway, fast forward to present. I'm now in the middle of an annual on 118EK and my mechanic has pointed out to me that the horizontal tail is showing too much movement when grabbed at the tips and pushed down or upwards. My first run at fixing this was to replace the horizontal tail bushings, however, this change has not corrected the movement problem. Upon looking at the bulkhead attach fitting I'm now believing that the bolt holes on this fitting have become worn, resulting in the horizontal tail still having this movement condition.

Question I have for fellow builders is twofold. Is this a common problem that T-18's with @1000 hours are experiencing? Also, assuming that there is no other fix for this (i.e., going to an oversize hole and bolt) I would like to know if there is a supplier that is selling this fitting as a prefabricated part. Upon looking in the Ken Brock catalog, I could not find this as a stocked item. If anyone has any thoughts on this then please let me know. I live in Napa California and can be reached most easily during day hours by email or my office phone # at 707-265-2187.

John Kempkey

### More On Excessive Horizontal Tail Movement

John Thorp has used the bolted bushing design for his rotating joints on his airframe designs. The joint was also used on the original Cherokee landing gear joints, since John did the 180 Cherokee preliminary design and provided the prototype gear assemblies. The bushings are to be pulled up solidly against the structure by tightening the bolt and elastic stop nut through the joint. The mating moving part (such as the 509 aluminum lug on the Horizontal Tail) then rotates on this stationary axle formed by the bolt and bushing. John called for Lubriplate grease on the plans but later endorsed Molybdenum (Molly) dry lube, since it does not tend to pick up and hold dirt. If the tolerance shown on the drawings is held, the bushing is always longer than the mating rotating part, thus preventing binding when the bolt and nut are tightened. **THE BUSHING SHOULD NOT BE ALLOWED TO ROTATE ABOUT THE BOLT.** In most of the joints there is dissimilar material at the rotating surface (aluminum on steel at the 509 lug). The walking beam joints are steel on steel but the lubrication and low velocity of the joint prevents wear or galling. Strength and stiffness are obviously important on these control system interfaces. Unless you are willing to become the responsible Engineer, one should follow the designs as John Thorp developed them.

Richard Eklund  
Eklund Engineering, Inc.

*Editors Note: In response to John Kempkey's question, I believe that the steel -584 fitting and pivot bushings are available from Ken Brock and also from Classic Sport Aircraft. I am sure that Eklund Engineering will also have them available shortly.*

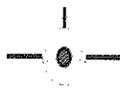


More On Excessive Horizontal Tail Movement

I have now disassembled the tail of 118EK and have inspected all parts to determine the source of my horizontal stabilator movement. Upon doing so I have found that the bolt holes on the bulkhead clevis fittings appear to be within acceptable tolerance as the through bolts show very little movement when placed into the fittings. Visually, the holes show no signs of wear. So it appears that the bulkhead fitting bolt attachment holes are not a problem. Upon looking at the stabilator spar pivot fitting holes, however, it does appear that they have become somewhat worn and the original bushings appear to be very loose when placed in position. So at this point it seems that a re boring of the pivot fitting holes, along with matching oversized bushings will be the solution to this problem. This leads me to ask your collective thoughts regarding the actual replacement of these bushings. My local machine shop is strongly suggesting that I should not have my replacement bushings machined from steel stock. Instead they are suggesting that they make these bushings from a composite type material. The machine shop operator is assuring me that the composite material will be as durable and strong as steel, but will not have the wearing affect of a steel bushing on the aluminum spar pivot hole. Although, this sounds like a good idea, I do worry that this is an off plan change to John Thorp's original engineering. So my question for you is should I go with my local machine shop's composite type material bushing or just insist on making this bushing from stainless or steel type stock?

John Kempkey

*Editors Note: Please read Eklund Engineering's information regarding this issue on the previous page.*



More On Excessive Horizontal Tail Movement

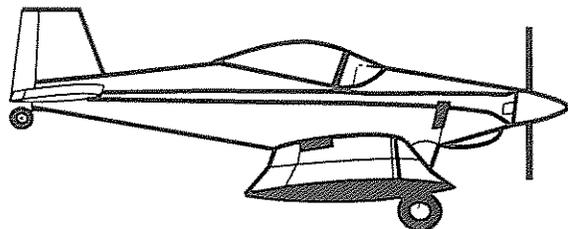
If the bolt holes that are drilled in the steel fitting on which the horizontal tail pivots are elongated, there has been a long on-going problem that should have been recognized some time ago. The horizontal tail actually pivots on two steel bushings that are supposed to be locked by the tension load applied to the bolts capturing the bushing between the two "wings" of the weldment that is riveted to the fuselage. The bolt should never have any movement relative to the bushing or the weldment. The horizontal tail pivots around the bushing. The biggest problem will be determining the original (designed) center of rotation and I see nothing wrong with using an oversized bolt and a suitably modified bushing.

Steve in Tucson N9008Z

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I agree with Steve's analysis of what rotates at the tail attach point. Check the fit and wear of the 594 spacers in the 509 horizontal tail pivot lugs. I suspect that is where the slop appears. I also made new 594 spacers at one time but that did not provide a complete cure. I still have some play in the horizontal when you grasp the tips and move them up and down. But again I say have your mechanic define "excessive" and be sure that you have properly identified the source of the movement. If your problem is similar to mine, I doubt that the cause is enlarged holes in the weldment.

Walt Giffin N78WG



More tech talk pg 18

## Lyle Trusty's Tapered Rod Tailspring

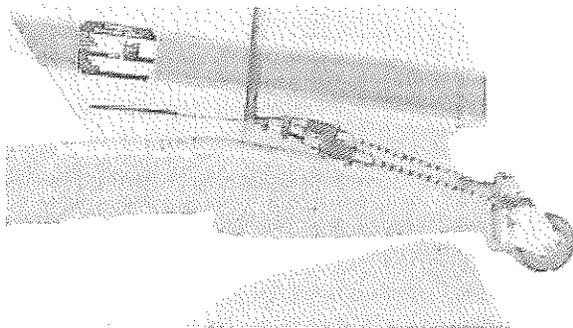
### MATERIAL SOURCES FOR T-18 TAILSPRING COMPONENTS

Harmon Lange, (503) 397-1478, marcy@langair.com, has been manufacturing these tailsprings for plans buyers. He stocks the material called out in the print, which is the same spring steel he uses for Wittman type landing gear for other aircraft types. He's been charging \$60.00 each. You should request that he deliver them in the annealed state, undrilled, and not bent. The adapter material, 7075 aluminum bar stock, is readily obtained from [www.mousebar.com/fhome.html](http://www.mousebar.com/fhome.html), (888) 466-8732, under the trade name of "Fortal". It is a surplus French aerospace product equivalent to 7075-T651 and is available at bargain prices, about \$2.70 per pound. Make sure you get a big enough piece the first time. They provide material certification for one dollar more, and ship your order the same day if you call in the morning. The standard 4130 heavy wall tubing is available at Spruce Specialty, (877) 477-7823, info@aircraftspruce.com, It is P/N 03-08000 (page 64 in their 2000 - 2001 catalog) for \$4.13 per foot. Minimum order is one foot. It is 1.250" OD X 1.010" ID, making the wall .120" thick. They also list P/N 03-19700, 1" X 72" X .125" 4130 steel strips, on page 66 for \$6.67. They will provide three-foot lengths of the 72" material for half that price.

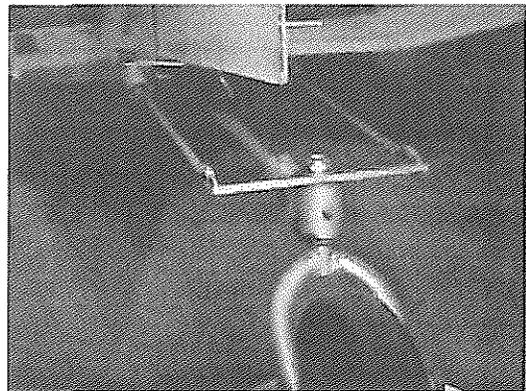
Lyle Trusty

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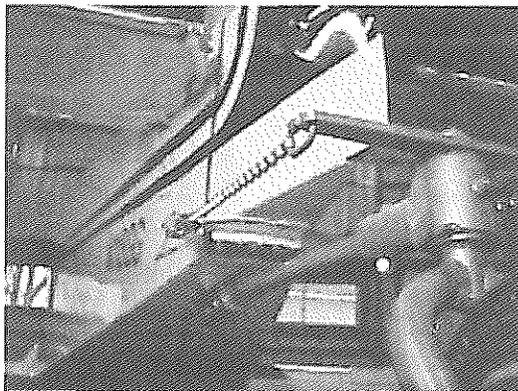
### Tailspring Installed



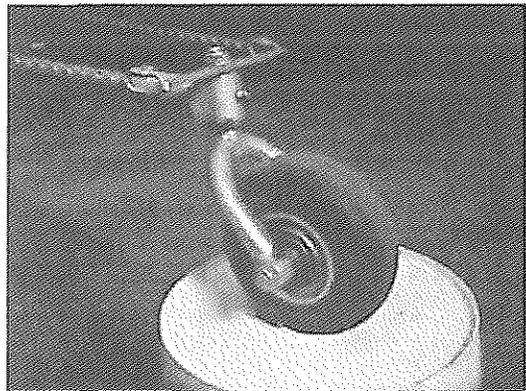
This my Trusty designed tailwheel spring which I built and installed during 2000..  
Bill Beswick



Gary Greens Installation



Gary Greens Installation



Gary Greens Installation

**Is This Your Last Newsletter ?**

For Sale Cont.

For those of you that are current on your membership I say THANK YOU !! For those that remain, I don't know what to say. Since I took over the position of Newsletter Editor, I have done everything I can think of short of canceling your membership and removing you from the newsletter mailing list. Well, since I don't know what else to try, and since I can't keep sending free newsletters, those members that are three years or more behind in their membership ... **THIS IS YOUR LAST ISSUE OF THE T-18 NEWSLETTER.**

This is sad, with the revived interest in the T/S-18 you will be missing out on the future of our great little airplane. It is now that we need to be building a strong organization, to provide technical and moral support for those that are following in our footsteps.

Roy Farris  
Editor



**Items For Sale**

I have a T-18C (folding wing) I would sell. Just no time to fly anymore. It has a IO-320, 160hp, and lots of other stuff. It needs the wings and tail painted, but otherwise is in great condition. The price is \$23,500. firm. It's in Jonesboro Arkansas. If you are interested let me know and I'll send more info and pics.

Don Nall  
don\_nall@hotmail.com

T-18 narrow body built in 1973. TT 495hrs , engine 1593 hrs. Great Airplane.. John Thorp Aluminum Cowling. SS exhaust, Landing light, wheel pants., electric trim. Asking \$19,750

RnT082338@aol.com  
253-631-1470

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For Sale or preferably trade, I have a type 2 dynafocal mount, it fits an IO-320B1A, B1B, B2A, B1C, B1D, or an IO320-C1A. It came with my "project" and I ended up buying an O-360-A1D. So I am in need of a type 1 or standard dynafocal mount. I did get a good dynafocal ring with the engine, so if anyone would happen to have the engine mount jig, I could make my own, but I would rather get one ready to go.

Dean Houseman  
[houseman@clas.net](mailto:houseman@clas.net)

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**THORP T-18 PROJECT FOR SALE**  
Construction started by A & P, aeronautical engineer. Work done so far - excellent. Reason for selling — builder has died. Good price. Location - Tennessee. 2,500.00 dollars For details call: (615) 223-0291 or email [pl2446dl@aol.com](mailto:pl2446dl@aol.com). No collect calls. Call before 9 pm CST.

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Wanted

Am still looking for a good T/S-18 with/ without folding wings.

George Avans  
[GR8DDS@desertsurf.com](mailto:GR8DDS@desertsurf.com)

For Sale Cont.

T-18 Project

Ken Brock landing gear & axles  
 Ken Brock dynafocal engine mount  
 Cowling - 5 piece fiberglass  
 propeller extension  
 fuel tank and straps  
 firewall  
 windshield and roll bar  
 canopy, frame and rails  
 seats and battery box  
 all fuselage skins and bulkheads  
 stabilator - completed  
 vertical fin and rudder - completed  
 Maule tailwheel and leaf spring  
 all push pull tubes and cables for control surfaces  
 flap and trim tab control systems  
 walking beam and control sticks  
 outer wings - completed with VOR ant. in wingtip  
 flaps and ailerons - completed  
 center wing - ready to rivet  
 extra wing skins made from John Thorps templates

Asking \$7000.00

Curtis Hopkins  
 11537 Jessica Lane  
 Lakeside, CA. 92040  
 (619)561-7119

T-18 N68DB For Sale

Equipped with minimal IFR panel, Mode C transponder, dual headsets, 2 props. Approx 50 hrs on airframe, 200 on Lycoming IO-320E1A. Almost all flush rivets, excellent work. Plush custom interior, installed by professional shop using NASA specialty foam. Custom built trailer included for road transport. 42,000 cash invested, now asking \$36,000 Serious inquiries call (337)873-2418 or write Don Broussard, 204 Tunica Lane, Duson LA. 70529-3921

Don

More Technical Talk

More on Tailwheels

I used the 4 inch, double-fork wheel. It weighs 3 lbs, vs 6 lbs for the 6 inch wheel. Overall, the assembly weighs 1 lb less than the leaf spring/Scott tailwheel I removed. I haven't flown with it very much (lots of rain here in Southern Wisconsin), but haven't noticed anything strange on the grass strip. The tire is as wide as a 6 inch tire, so its pressure loading would be the same as the larger diameter tire. I bought mine from Aero Products, Ojai, Ca. I'm not sure, but I recall the Aircraft Spruce is a 20-degree fork angle. What you need is a 10-degree, to get the spindle vertical. PS - I made my own tapered spring per the Lyle Trusty plans.

Ed Pernic

Thorp E-mail List

The Thorp E-mail list is a great medium for the exchange of information. I have received some complaints because of the potential for virus infection. To get around this problem you can choose to view the information on-line and not download it to your computer. Follow these directions to view the content on-line:

1. Go to <http://groups.yahoo.com> and login with your Yahoo username and password
2. On the left select your group list under "My Groups" click the thorplist
3. On the right under membership click delivery options
4. Under "Message Delivery" select "No email"
5. Finally click the save changes button

When you want to read the digest just go to <http://groups.yahoo.com> and select the thorplist to see the digest. Hope this helps!

David Taylor ~ Future Thorp owner

## Upcoming Thorp Events

*If anyone has an upcoming Thorp Event that they would like listed here,  
Please notify me by phone or Email*

July 24 - 30, 2001 ~ Airventure 2001 ~ Oshkosh, Wisconsin The T-18'ers usually have a combined lunch and forum on Friday at noon in the Nature Center. We have a nice lunch followed by a small but informative forum. This years activities are tentatively scheduled for Friday July 27. Anyone who has an interest in the T/S-18 is encouraged to attend, and bring a friend. For more information contact Roy Farris at (618)723-2594 or by Email at: [rfarris@wworld.com](mailto:rfarris@wworld.com)

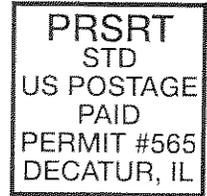
September 1 - 3, 2001 ~ 10 Annual Thorp Fly-In, Porterville, CA. ~ A reminder about the P'ville California Labor Day Thorp Gathering. Again this year put on by Hal Stephens and a great team of people from California and held in Porterville. Mike and Frankie Archer's Classic Sport Aircraft, home of the Thorp parts and plans will provide hangar space, and will be hosts to the guests flying their beautiful Thorps or driving in to see them. Labor Day is the first weekend in September.....It's the Tenth Annual.....can you believe it.....9 proceeded this one and they only get better....Everyone is invited....ya'll come! For more information contact Hal Stephens at (530)295-1867 or by Email at: [aerohal@inforum.net](mailto:aerohal@inforum.net)

September 15, 2001 ~ Goderich, Ontario ~ Aviation Day, Hosted by Sky Harbour Aircraft and COPA 45. We will be providing breakfast, and are eager for members of the T-18 Mutual Aid Society to display their aircraft. For more information contact Jerry Hall at (519)524-2165

October 12 -14, 2001 ~ Kentucky Dam Fly-In, Gilbertsville, KY. For Lodge reservations phone (800)325-0146 and ask for the "Paine Party". For more information contact Jim Paine at: (828)698-0368 or by Email at: [jpaine@cytechois.net](mailto:jpaine@cytechois.net)

T-18/S-18 Thorp Newsletter  
Roy Farris  
P.O. Box 182  
Noble, IL. 62868  
Phone: (618)723-2594  
email: rfarris@wworld.com

July 2001



Please check your mailing label for the "PD" entry in the upper left corner above your name. If you don't see the "PD" entry, then your membership is not current, and we may be forced to stop sending your newsletter. Please send the dollar amount listed on the label. Any amount over 25(US) or 30 (outside US) indicates that you have failed to send previous years dues. Please be kind and send your dues now.

Make a photocopy or clip out this form and return it with your payment.

**THORP T-18 MUTUAL AID SOCIETY ----- 2001 DUES**

Please continue your support of this valuable exchange of ideas, building tips and safety information covering John Thorp's greatest design. Please make checks payable to: Roy Farris P.O. Box 182 Noble, Illinois 62868. Make check for \$25.00 US, \$30.00 for outside. I don't know yet how the postage increase will affect out mailing costs.

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email address: \_\_\_\_\_  
Notes: (building, flying, thinking about it, etc): \_\_\_\_\_