

TIGER TALES

The Newsletter of the Thorp T-18 Mutual Aid Society

Issue 6/7 August 2012



Thorp Spring Gathering 2012 - Fredericksburg, TX

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From the Editor – Lee Walton

Hello fellow Thorpie/T-18'ers! I'd like to start off this issue by apologizing for the lack of a second quarter Newsletter this year. Without getting into details I've had some personal "issues" to deal with and just could not make it happen this time. Don't fret, this was certainly not for a lack of things to talk about, in short I'll just a commit that it will not happen again.

As most of us know we will be celebrating the 50th anniversary of the T-18 next year at both Sun n Fun and Oshkosh. In the next few months we need to get a game plan in place for both events. Please feel free to contact me with any ideas you may have, at this point we have several ideas on the table renting a house in Oshkosh for a group of us, arranging for a Thorp Showcase before the airshow(s) and a formal Thorp Dinner to name a few.

I've included an article written by my father not too far before he passed away. I found it a few years ago and although I do not expect it to touch any of you the way it does me, it does however capture how I think many of us feel about our creations. It may also perhaps show you gents just how many years Bob Highley has been influencing this group!

On a sad note I sold N589LW last month to Mr. Dave "Homey" Holmgren in Salt Lake City, UT. It was a difficult decision for me but in the end a necessary end, I have another Thorp in the final stages and more than one to a man is just greedy! After meeting Dave and flying with him Ol' Red is in good hands. Take care of her Dave!

Don't forget to make your Kentucky Dam reservations/plans (details at the end of this Newsletter)! It's coming up in a hurry. For those that would like to arrive early and do some formation training, there will be a group of us arriving early Thursday to get some flying in.

Enjoy!

Oshkosh 2012 – Lee Walton

Oshkosh 2012 was as always a good time, attendance Thorp-wise was a bit down but the general conscientious was that people were/are holding out for next year's big 50. If that's the case all of you slackers are forgiven. As usual the Thorp Forum/Lunch was held Wednesday in the Nature center, Bob Highley discussed Thorp Aerobatics, David Read gave us an update on his enlarged fuel tank mod (see article in this issue) and the Spring 2013 Gathering location was attentively chosen to be Gary Green's oasis in N. Arkansas.

On another note and worthy of mentioning, Scott and Howard Ginn flew Scott's recently purchased Thorp in and effortlessly snagged a Bronze Lindy. Those who do not know the history of this airplane will have to wait as I intend to tap Scott for a write-up in the next issue.

Oshkosh Attendees – pictures provided by Richard Eklund (not pictured here are John Evens and Richard Bentley ... sorry guys!)



Scott Ginn (Winner Bronze Lindy 2012!) huge congrats to Scott and builder Ray Henning.



Gary Green



David and Karen Read



Bernie and Melva Fried



Bob and Susan Highley



Lee Walton/Wendell Green



Bill Williams/Duke Raven



Cliff Goldstein (Ed Ludke's old airplane)



The early arrivals, Ron and Jane Hayes, Dave Flatter and of course Dave and Pat Eby

Spring Gathering 2012 – Lee Walton

Many thanks to everyone who attended the 2012 Spring Fly-In; we had 25 Thorps in attendance. In the end we outnumbered our warbird friends and in my opinion out flew them too. The long distance award is a tie between Chuck Kincer from Maine and Paul MacMicheal from the Seattle area. In addition Dick Wolfe and Jim Mantyla made the trek all the way from the Great White North to attend via commercial travel. Dave Eby once again provided ground transport for us all weekend. Thanks Dave!

Some visuals for you fellas...



Good times at the Airport bar.



Gomer Gazanchech – The one and only!



Wendell Green, Jim "Cubes" Grahman, Rich Brazell and David Read obviously engrossed in a "serious" Thorp conversation.

Attendees, not pictured are Paul MacMichael, Marty Parrish and Ron Holander (Sorry Guys)



Gary Green - AR



Robert Sanders - TX



Fred "Spanky" Clifton - NV



Dave Eby's old airplane now back home in Wichita Falls - TX



Wendell Green - TX



Bill and Debbie Williams - FL



Richard Bentley - LA



Bob and Susan Highley - FL



Ron and Jane Hayes - MO



Don Doubleday/Jerry Sharp - TX



Alex Whitmore - TX



Dave Flatter - MT



Jim "Cubes" Grahn - NV



Fraser McPhee - UT



Les and Margie Conwell - FL



Bernie Fried - TX



Rich Brazell - CA



Pat Hicks - TX



Lee Walton - TX



Lonnie Tucker - TX



Chuck Kincer - ME



David Read - IL



Thorp ramp at T82, Thorps on the right, warbirds on the left.

Thorp Wins Aircraft Spruce Homebuilders Story Contest – Rich Brazell/ACS

Congratulations to Rich Brazell in winning this quarter's drawing for sharing his building success story titled "27 Years of Determination - NX115RX".

27 Years of Determination - NX115RX

I knew when I fully retired, if there is such a thing, that I wanted an airplane to occupy my spare time with its infinite joy, experiences and occasional trouble shooting challenges, but first I needed to find that airplane. Early in 1984, I happened upon an aviation article describing a folding wing aircraft that you could trailer to and from the airport and Gus Gordon's Thorp S-18 was that airplane in the article. It had everything I wanted. Speed, 2 place, holds a reasonable amount of baggage and with a standard fuel load, about 3 hour legs and of course I could keep it at home. I don't recall what hangar rent was going for in the San Diego area at the time, but I knew by the time I had the aircraft built, that rent was going to be very expensive, so the Thorp S-18 with folding wings seemed to be the logical choice for me.

So from the information in the article, I ordered a set of plans in September of 1984, not knowing it would take me 27 years until the aircraft would have its first flight on the 3rd of April 2011 at Brown Field in San Diego, California. At about this same time I joined the T-18 Mutual Aid Society, a group of Thorp builders that shared building ideas/challenges and posted items for sale in their want ad section. This is where I happened upon a partially completed S-18 project. The basic fuselage was done and it came with an assortment of formed ribs, beams, brackets and several rolls of .032 aluminum skins and a list of other miscellaneous items. The only problem

was this "project" was located in Addison, Texas and I was in San Diego California. So I boarded a commercial flight to KDFW and rented a U-Haul truck and drove to Addison to pick up the project from Dick Cavin. Once loaded I headed West and figured it was an approximate 27 hour drive, stopping only for fuel, food and an occasional pit stop. This journey across the Texas pan handle and through New Mexico and Arizona would have been a little easier if the U-Haul truck had air conditioning and an automatic transmission, but that would have made it a vacation and not an adventure!

All was going well until I reached the Arizona and California border and had to stop at the agricultural station for inspection. The young lady at the check point asked me what I had in the back of the truck. I replied "An airplane Ma'am!" It was obvious to her that I had something in the back of the truck other than an airplane and she smartly ask me to open the back of the truck. The expression on her face (much like a politicians') did not change and seeing that I did not have any contraband or other "illegal cargo" she told me I was free to go. I was on the home stretch now and *exactly* 27 hours after leaving Addison I was in my driveway. Now the real work was just beginning...

No one can begin to tell you how big a challenge it is to build an airplane. It would be akin to your first arrested landing on an aircraft carrier, in my case CV-16 in 1977, there are no words to explain the process other than it is a lot of hard work to get there. I had a partial project with a bunch of unassembled parts, a set of plans, a large workshop, plenty of tools; now all I needed was *time* to put it all together. The only obstacles in my way were the U.S. Navy, being a new hire at the Airlines, and moving to a new house. Once off active duty, I immediately joined a Naval Reserve squadron (the same one I had been with as an active duty pilot) and now faced having to divide my time

between the airlines (commuting to my East Coast base from San Diego) and giving at least 3-4 days per month to the Reserve Squadron. This left virtually zero time to work on the project and almost no time to do house related projects. The only available time to do aircraft related stuff was "vacation time" and that was not near enough. When I did find some valuable time to "bend metal and buck rivets" it was suggested that I start with the rudder as it was purported to be the most complicated part on the aircraft to construct due to its series of bends the skins required and also the difficulty in riveting the entire control surface together, so I started there. The Thorp was designed using "machined hole tooling" which meant no jigs were required and if proper placement of the rivet hole locations were made, one could simply drill holes at the proper locations and it would all line up correctly when clecoed together. For the most part this was true, but it still was a learning curve, especially with me using new metal working tools like a brake, drill motor and a rivet gun and bucking bars. Along with this learning meant there were mistakes and I am sure every new home builder has a "pile" of mistakes that constitute misdrilled holes, incorrect bend lines, improper rivet setting and a list of four letter words I cannot use. In spite of several of these afore mentioned setbacks the rudder was finally completed and it was time to move on to another section of the aircraft.

In San Diego a hangar can run \$500 month...\$6,000/yr! That chunk of change pays for a lot of fuel, maintenance and insurance. It was a battle to stay focused and maintain quality control even if it meant making four of the same part until I got the "just right" part called for by John Thorp on his drawings. This might be a good time to touch on the JT's (John Thorp's) hand drawn engineering prints. Yes, I said hand drawn, not computer generated. Remember this aircraft design was developed back in the early 60's and there was no such

thing as CAD (Computer Assisted Drawing) so all the nearly 200 + drawings were done on a drafting table with a T-Square and pencil. It took a little work and with the help of a good friend at Gillespie field (Mr. John Kerr who has built 3 T-18's!), I was able to sift through a few problem areas on the drawings. What also helped was that most of the drawings were either "full size" or half scale. Using the full size drawings (for example a flap hinge) meant I could make a copy at KINKO's, cut the drawing to the line and then transfer the template to the raw stock and using a metal band saw cut the part and shape it (as required) with a disc/belt sander.

The basic plans built A/C was pretty bare on the inside meaning it had no creature comforts other than seats. No upholstered side panels, no carpet and just a basic instrument panel. Heat and fresh air sources were also optional. This would not do as I was accustomed to the creature comforts of larger aircraft I have flown over the years. Adding these "extras" would of course add time to the building process as well as requiring more money in the budget. It was felt that adding these "extras" now during the building process would in the long run save both time and money. The first consideration was the panel and what to put in it. As I will be a VFR machine I chose an all electric panel, meaning no vacuum pump, regulator, hoses and filter, saving weight and space. The ADI, DG and T & B are electric. The Micro Air "package" was used (Radio/transponder/intercom) all prewired with a plug and play harness. A TruTrak 2 axis autopilot was also installed. All engine gauges are electric, meaning no fluid/pressure lines in the cockpit. The exception to this being the fuel tank to fuel valve to firewall fuel line. The only other additions to the panel were the remote ELT test/reset switch, RAC trim indicators, HOBBS meter and a cigarette plug adapter (for warming in flight meals) !

Now that the panel was pretty much complete, it was time to work on what I call the fuel management and environmental control console. I did not like the idea of using 3 different push/pull controls (Vernier type) for the engine and having started my training in a Piper Cherokee with a throttle quadrant and having a quadrant in the larger transport aircraft I flew, I felt more comfortable having that type of setup, but the only problem was I could not find a small enough of a unit through a supplier...so I needed to build one to fit the space and my requirements. I knew the basic design I wanted and after about 2 months of R & D and several prototypes, I ended up carving the housing out of a block of solid acrylic. The 3 levers one for the throttle (black), one for the mixture (red) and one for carb heat (silver) took several more weeks to get the right length, bend and throw. I also designed the unit to use the same part number control cables of the same length. The unit fits nicely on top of a housing that also holds the Andair fuel valve, guarded switch for the primer solenoid and the two push/pull controls for cockpit fresh air and heat and the rocker switch for the electric rudder trim. It is a lot of "monkey motion" installed in a small space, but it enables me to control everything with the right hand (while keeping the left hand on the stick). Speaking of the stick it has aileron, elevator, PTT, radio freq. flip/flop and auto pilot CWS (control wheel steering) switches in the grip. I then dressed up the interior with some marine grade carpet (over insulation), S/S skid plates on the floor and covered some panels with vinyl to install on the sides of the cockpit. A baggage compartment was also installed to carry the necessary RON items. The day came when 99.9% of the construction was finally complete and it was time to trailer the A/C to Brown field for the first flight. As you can imagine there were a few turned heads and puzzled looks on the road as I headed to the field. The first flight went as advertised and the aircraft returned safely to Earth after 45 minutes with all its parts

and the test pilot (me) satisfied that 27 years of building had come to a well deserved conclusion. The Thorp S-18/T-18 is a great airplane and performs as well as the other homebuilts in its class for about half the cost. If you want additional information on the Thorp S-18/T-18 you can go to our Forum site and find comparison performance information on the Thorp, RV and Mustang II aircraft. The Forum site also has a photo album and a great reference library should you have any questions. Google T18.net and click on Forum. Now it's time for flying to points East for some \$300 hamburgers and start my next project.....restoring my 1969 MGB that I bought in 1970.

40 Gallon Main Tank – David Read

As long as I was already doing some light maintenance on 718DR, I decided to go ahead and up my fuel capacity a bit. When I go to Sun & Fun I could very nearly make it with one fuel stop, but it is close enough that I have never tried. I did not want 5 hours of fuel for various reasons but another hour or so would be nice. I mulled over several possible solutions and eventually decided that enlarging the main tank might meet my requirements. Since I have a glass panel there was room to move the tank rearward as far as the dash frame. This gained about three or four inches which I hoped would increase capacity by as much as 8 gallons. I ran some preliminary weight and balance calculations based on the original numbers for the plane and felt I would still be within limits. Therefore, when I began this process I made the tank as large as I possibly could, not sure what the end result would be. I wanted to keep the plane reasonable simple and this arrangement allows me to have only one point to add fuel,

there are no bothers with having to transfer from tank to tank, in fact I intend to gravity flow to the carburetor so there will be no pumps in the system at all.



First I made a cardboard approximation so I could test if a larger tank could be installed and removed. Then I cut a plywood template the size of the finished ends and bent a sheet of .040 3003 to the proper contour in a roller. I happened to have a form block for the ends of the standard tank and I used it to form a lot of the ends. The new tank has nearly the original shape if you just pull the tank away from the firewall a few inches. Then I clamped the ends in the tank, tried to put it into place, and began the process of trim, fit, trim, fit until it would go in without distorting anything. As it happened I did not have the boot cowl on yet so I could use a straight edge to see where it stuck out too far on the sides and where it would be too tall. When satisfied with my fit I did take measurements on the main tank skin so I could duplicate it if the need arises.



Tank construction itself is normal. If you look in the background of the above picture you can see the beginnings of a cheek inlet for a metal cowl that I am going to attempt later. I TIG welded the seams and pressure tested it to about 2 psi. I admit that it took several attempts to get it leak free. It is amazing to me that even at that low pressure the tank expands like a balloon. That is the source of some of the dents that you can see in the center of the tank. For my tank I welded on a scupper to contain spills and drain them overboard through a tube connected to the back side of the tank vent in the belly. I carried the tank out to the picnic table and started pouring in water. I was as surprised as anyone when at this point I put in 42 gallons! I don't expect to be able to put in that much in practice but I do expect to be able to load 39-40 gallons.

After discussions at OSH about my plans I followed some of the recommendations I

received toward reinforcements to the structure to carry the extra weight.



I had previously made the cut out in the tank supports to allow clearance for the brake pedals as suggested in the newsletters. There is plate reinforcement already in place for that. I made another piece from some .25" scrap that I had that sits on top of the cutout reinforcement so all of the tank weight is not concentrated just on the edge of the tank support metal.

Then I took some .050 stainless and made 1 ½" wide strips to give a wider support area for the tank to set on. I moved the attachment point for the turnbuckle to the tank straps back to the dash frame itself; I drilled out the bottom rivet that attaches the angle to the dash frame and

put an AN-3 bolt in its place to hold the top of the turnbuckle.

I also upgraded to the next larger size of turnbuckles. The dash frame is going to have more stress than before so I made a doubler of .032 to lie inside the original frame and added a rectangle of .050 so all of the stress from the turnbuckle bolt is not concentrated in one small area.



I also made a small piece to transfer some of the stress directly from the dash frame to the WL42 angle.

The flange for the fuel level sender is installed and I did put an access hole above it in the boot cowl skin. I have had a couple instances where I have had to remove the sender for repairs. I have not installed the outlet yet because I want to run the fuel lines first in case there is an advantage to putting it off to one side or the other. My previous one was in the center as I figure most are. If I were to build another tank I would use 6061 T6 for the main body; I think it is not as soft as the 3003. Soft is good for forming the ends but I think more rigidity would be good around the support areas.



I have run weight and balance comparisons with the tank at 40 gallons and shifted its datum point aft to compensate for the longer tank. It will be interesting to see how close I am when I finish and can actually weigh it with and without fuel. As it appears I am at the forward limit with 40 gal fuel, and only a 120 lb pilot. Aft CG issues should be no different than with the standard tank.

Thorp Tow Bar – Rich Brazell

I needed a tow bar to maneuver the A/C into position to get it onto the trailer, plus I wanted to carry a tow bar in the A/C "just in case." Well just in case proved true during the flight testing phase at Brown Field when I had a flat tire on

the runway during my taxi tests. The EAA drove out a pickup and we put a dolly under the flat tire and I sat on the tail gate of the pickup truck with tow bar in hand and we pulled the A/C to the EAA ramp for a tube change. That was the first use of the tow bar. Looking at the design, I decided to try and make one of my own after purchasing the first one from Bogert Aviation (you can also get them from Spruce) for \$100.00 (tax and shipping). I went to the local metal yard and purchased less than \$10.00 worth of tubing and coupled with my outstanding welding skills (scale of 1-10 about a 7), I made almost an exact copy of the Bogert unit. No jig required. All bends were done on the vice with "soft jaws." The flat areas where it was needed to be bolted together were flattened with a 5 pound sledge.



My second encounter with using the tow bar (other than aligning the A/C for trailer use) came at KSEE when I had an over the numbers engine shut down due to carb flooding. Having enough speed I was able to make the first turn off between the dual runways and stop. Again I was towed to the ramp with me sitting on the back of a pickup truck holding the tow bar. All is good except when you reach an incline (however slight) when your arm will try to be

pulled out of its socket! It was then I knew I needed a little something extra to make my arms the same length! I went to the surplus store and bought a "tie down" ring and welded it to an extension that replaces the "T-Bar" handle. The ring slips over the trailer ball while I can sit on the tail gate and monitor the tow progress. The modified extension along with the "copied tow bar" remains in the A/C, "just in case" I need it for future tows. It is also available when I go X-City for anyone needing it that has an Aviation Products double fork tail wheel. I suppose it would work for the single fork wheel? Having the "spare" bar makes it a lot easier rather than R & R the bar in the A/C each time I need it. No...I am not that lazy, but for \$10.00 I say it was a worthwhile investment.

Happy Towing!"

RB

NX115RX

The Saga of one Thorp T-18 - John Walton

Thorp T-18 N51863 was conceived in our basement in Neenah, Wisconsin where she grew toward completion over a span of 5 years from 1974-1979. IN 1979 a job change to Houston, Texas necessitated pulling up the house's dining room floor and carefully exiting the T-18 through the adjacent window opening. This operation was quite simple, though it received an inordinate amount of awed attention from onlookers, not to mention visible dismay from prim donna real estate agents endeavoring to impress prospective house purchasers. When all was done the floor was methodically replaced with full-length

doubles up 2X10's any EAAer would know that floor was stronger than it was before.

Meanwhile, '863 was crated in 2X4 and plywood crates so rugged that she could have survived a ride over Niagara Falls. The Thorp was trucked in a moving van to our new house in Houston. Long before such minor items as clothes, china and furniture were dutifully unpacked; the T-18 was snug in the former two car garage which would of course be the airplane shop. During the next year the second 90% of the construction was completed. She was trailered to David Wayne Hooks Airport Northwest of Houston and with the FAA's blessing readied for her maiden flight.

Little did we know that on that crisp clear day in January 1981 that 863's construction had just begun. Two years later we would elect to replace the original Thorp wing with a more elaborate Sunderland convertible (Folding) wing. Then three years hence a killer line squall containing microbursts and tornadoes at the airport would severely damage the Thorp. She is just now emerging as a T-18 muscle machine with a new panel, O-360 Lycoming and constant speed propeller, included in with extensive repairs. But this is getting a little ahead of ourselves.

The construction of our T-18 began in all the time usual ways of a first time project, absorbing EAA manuals, accumulating tools, material and seeking out answers to the miracle of questions that beset a fledgling builder. In 1974 the Fox River Valley was far from the EAA "hotbed" headquarters it is today. Back then, headquarters was located in Hales Corners and there wasn't another Thorp being built within hundreds of miles of that vicinity. There was a

builder though, who had completed his T-18 and was always a big help. He was B.C. Roemer of Manitowish Waters, Wisconsin. Not surprisingly then family and new friends had a lot to do with the gestation of '863. Had it not been for my wife Barbara though the Thorp would still be a gleam in my eye(s).

I had admired John Thorp's magnificent all-metal homebuilt since he first exhibited his concept and plans during Rockford during the early 60's. This enthusiasm took the form of examining T-18's at Fly-Ins and out of the blue talk about the one we would one day build. Then one night shortly before the 1974 Oshkosh Fly in Barbara said, "You know you've been talking about that T-18 for 10 years; by the time you think you can afford the time and money to build it, you'll be too old." As usual she was right. A week later at Oshkosh that wonderful EAAer the late Dr. John Shinn sank the hook by taking not only me; but both my small sons Lee and Peter for a ride in his beautiful 135hp Thorp. Then, lo and behold as if by providence, that same month what should appear in the August Sport Aviation but a T-18 project for sale. For the princely sum of \$400 a dusty collection of aluminum sheets, plans and some generally useless, poor quality parts to up their temporary residence in that afore mentioned Neenah basement. This was before the days store bought and or pre-punched parts; so considerable time was spent making form blocks and laying out sheets. Fortunately with all the excellent T-18 suppliers in the market today, these exercises are no longer required, simplifying further the clear straightforward process of building a T-18. I should mention in vein that the T-18 newsletter, which has been in publication and circulation for over 20 years can be an invaluable help to all builders as well as

owners. The sometimes rambling pages of this labor-of-love contain explanations of almost all aspects of building nevertheless upcoming issues continue to reflect the newer ideas of today's owners or builders. Every owner or builder should be sure to be tuned into this important information source.

My son Lee was just 5 years old when he took that first T-18 ride. He soon began helping with our T-18. Long before these milestones had been accomplished he had already demonstrated more than a childish interest in things mechanical. He was the only young child I ever heard of who extensively generated his own elaborate HO train layout, which he also helped build, without ever abusing or damaging a single one of those delicate locomotives and rolling stock. As the T-18 evolved, so did Lee. Though his older brother, Bill, ably bucked most of the rivets, Lee was there inspecting and checking to be sure everything was correct. By the time we moved to Houston he was reading plans (John Thorp's plans are almost flawless) and becoming really involved in the instrumentation and engine installation phases. The O-320, 150hp Lycoming was test run in the side yard, waking up neighbors on a Sunday afternoon who I'm sure, were shocked to hear an airplane suddenly blare forth in such proximity. So naively confident that '863 would fly well was I that I painted for before the trip to the airport. Although this never proved to be a bad decision in the future I'd test fly first, then gussy her up with paint and upholstery trimmings.

Our T-18 was test flown from David Wayne Hook's airport by Col. Del Hainley (USAF-R) on Jan 4, 1981 and by "Mr. T-18" himself, Dick Cavin a few days later. Both gentlemen seemed

to develop rather severely embedded smiles during their first flight experiences indicating that she indeed did meet T-18 handling standards, much to relief of her ground bound builder. Dick and Del kindly (and patiently) helped with the 40 hour FAA mandatory test period and provided me with needed dual instruction. I had not flown any aircraft in 10 year, and the only tail wheel aircraft time then was in a J3 Cub. After 11 hours, Del allowed me to solo and it has been an all –fun experience since. I now have over 400 hours in the T018 and did much of the flying for my instrument rating in the Thorp.

Lee and I covered a lot of ground those first two years, Oshkosh twice, as well as trips to Atlantic City, Boston and throughout Texas. We soon began to realize though that those long trips and 2 ¼ - 2 ½ hour legs were costing us a lot of time refueling. We figured that if we could put another 20 gallons of fuel in the wings we could pan over 4 hour legs. This would put us no more than one pit stop away from almost anywhere we wanted to go; which weather allowing could be done in one day, Hence the retrofit of the Lu Sunderland conceived convertible (folding) wing. We built this wing using the hydro pressed ribs and pre-marked from Ken Knowles Sport Aircraft, a T-18 parts supplier (today Sport Aircraft Inc.). The construction of this wing is definitely more involved and time consuming than the originally Thorp wing. The wing disconnect feature and interfacing aileron bell cranks used to transmit pushrod aileron control are straightforward in design but demand some very accurate work in assuring that this unique installation is done precisely. Instruction in the above mentioned newsletters cover these procedures. Our wing was made more elaborated by the “wetting” of the leading edge

of the two outer panels. This put additional fuel almost right on the CG and provides a lot more cross-country flexibility at a minimal addition to empty weight. We estimate a weight gain due to the fuel cells is 15 lbs. (tank sealant, filler caps, fuel pumps and plumbing). A detailed account of how this modification was engineered and accomplished has been published along with numerous drawings is available from me at a nominal \$10 charge to cover copying costs and postage. The test flying of the new wing was simply a confirmation of earlier reports on this configuration. 5 mph slower stalls due to the rounder leading edge of the airfoil, a bit heavier on the aileron (smaller) but o problem, fuel consumption and cruising speeds seemed to be the same. Our first cross country to test out the new wing and its extended range capability was a modest little outing from Houston to Chino California. We make 2 fuel stops, though the second was more of a weather stop to check late afternoon conditions at the banning pass and L.A. basin. After quickly learning about “California VFR” we arrived at Chino uneventfully 12 hours out of Houston.

The same summer of 1983 our Thorp was selected to be one of the custom built exhibit aircraft at the Dayton International Air Fair the weekend before Oshkosh. This was a memorable experience for Lee and me as we enjoyed meeting the many fine people behind this operation as well as having our Thorp admired by many interested people. After Dayton we flew to the east coast to visit friends and then headed west for Oshkosh, the following weekend. The long range takes were getting their work out and proving to be all that we anticipated in enhancing the cross country

potential of the T-18. Then the week after Dayton the next momentous moment occurred.

One morning we arranged to do some in-flight photo work, with Lee serving as right seat photographer in Col. Bob Highley's beautiful beige O-360 powered Thorp. Bob, an F-16 pilot by vocation has his T-18 fitting out to be almost as quick. Up front to complement the big Lycoming, is a standard 72" Hartzell Constant Speed propeller. The acceleration and climb performance differences between the two airplanes really impressed Lee. In comparison to our O-320, fixed pitch, Bob's T-18 was another breed of Thorp all together. When we both arrived back at the Oshkosh Fly-In and shut down, Lee climbed out of Bob's aircraft, walked over to me with a foot wide smile and said "Dad we've got to do something with this thing, it's a pussy cat, Col. Highley's Thorp is a real T-18." Opinions on that probably differ, but we did decide that since we did have plenty of fuel capacity, the bigger engine and constant speed propeller we rationalized would be helpful on warm days and on some of those shorter runways. Thus plans were made to attempt to obtain the bigger powerplant and propeller, but progress almost never happens in a straight line, and Mother Nature was about to get into the act.

A few months later, in February 1986 we did in fact acquire the requisite low time Lycoming O-360 with a new Hartzell constant speed bolted to it. One day later the aforementioned line squall with tornados descended on Hooks airport and took her grim toll. The next morning the airport looked like the aftermath of a World War II bombing raid. Large and small hangers were folded up or moved away like tin foil. Aircraft and their parts were everywhere. Of

the excess of 400 aircraft on the field over 100 were total wrecks and over 200 had varying amounts of damage. Our T-18 was one of the later casualties.

She had been hangared in a standard tee hanger with a Cessna 140. She was in the hangar sideways with her nose pointing at the 140's rear window, and her left wing perpendicular to the hangars 2 rolling (sliding) doors. When the storm hit the doors came crashing inwards as the corrugated roof flew off. The left wing of the Thorp went through the metal sheet and the plane was catapulted sideways by the force, impacting the right wing tip, ailerons and flaps up against the side wall. Miraculously, the plane came to a rest with the side of the fuselage less than 1/4" from the large corner column midway back in the Tee hangar space. Meanwhile, that poor Cessna took a beating too, and possibly saved those doors from coming completely down on the T-18.

When all the T-18's damage had been accessed it was bad but not as bad as many had suffered. The left outer wing panel, three of the four flaps, both ailerons and fiberglass wing tips were damaged beyond repair. There was damage to one of the wheel pants and the aluminum landing gear leg fairing as well as a crack in the left fiberglass cowling where the left strut of the Cessna impacted it. Other parts had numerous paint scratches, but the fuselage, tail and powerplant came out of it without damage. Blowing particles had ruined the polyurethane paint job, but the heavy lined canopy cover had protected the canopy from any damage, before itself coming part way off.

Our T-18 had flown 412 hours in just over 5 years and here she was home in that garage for another building project. This was indeed the time to make any and all "improvements," as well as repairs. Over the past two years a list of almost 40 major and minor modifications have been incorporated.

At this writing, we are just finishing the upholstery on the new Temperfoam lined seats, with only a new weight and balance still need to be done. She has her Lycoming O-360 and constant speed propeller up front. The instrument panel has been replaced; the new one having a central avionics stack and a Loran. Finally, the originally parts were stripped of the Imron, and were repainted with new polyurethane.

Each time Lee comes in the garage now his eyes seldom leave that long wide propeller; almost as if he's thinking of another photo flight with Bob Highley, but this time with your writer taking the pictures of Bob's T-18 while Lee flies that old pussy cat which has become a Tiger.

Kentucky Dam Reminder 2012 – Lee Walton

The dates for the 2012 T-18 Weekend at Kentucky Dam are Oct 5, 6 and 7. A block of rooms has been reserved for October 5th and 6th. The private dining room has been reserved for Saturday night at 6:00 p.m. We will again be enjoying the buffet. Please make reservation with the park directly.

You must specify you want the Paine Party in order to get the special rates. The lodge may be full other than those rooms reserved for our party.

Call 1-800-325-0146 for reservations

Camping and cottages are also available on a first come, first served basis. Contact the resort for more information.

Kentucky Dam State Park Airport (M34) is 30 miles east of the Cunningham VOR (Paducah) on the 90 deg. radial, 8 miles South of V178. The runway is paved and 4000 feet long. The airport is approximately a mile from the resort, and transportation is available both to and from the airport for those who do not wish to walk. Please bring your own tie downs.

For additional information on the fall get-together, E-mail Lee Walton at leewalton@yahoo.com

Upcoming Events

10/5-10/7 **Fall Gathering** Kentucky Dam State Park, KY (M34) Reservations: (270) 362-4271 Contact Lee Walton (leewalton@yahoo.com) for details.

04/09-04/14 Sun-n-Fun Lakeland, FL Note: This will be our Thorp 50th kickoff event. Details will be posted on the website and in the next issue of "Tiger Tales".

A **BIG** Thanks to both David Read and Rich Brazell for their contributions to this issue of "Tiger Tales".

In the next issue (so far):

KY Dam 2012 – Lee Walton

KVIS – Rich Brazell

If anyone would like to contribute to the next issue please contact me;

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