TIGER TALES

The Newsletter of the Thorp T-18 Mutual Aid Society

Issue 9 May 2013

David Read's Metal Sculpture. N718DR Emerges, stronger, lighter, faster than before!

IN THIS ISSUE

From the Editor – Lee Walton

It seems lately I've been starting of this portion of the newsletter with an apology for lack of publication. This issue is no different as it is indeed very overdue but rather than make excuses I'll just say I think this particular issue will be worth the wait.

A quick update on my progress, N118LW is coming along well but with all projects, the last 10-15% takes up half the time. Currently I'm fitting the cowl we laid up at Bill William's place during Sun n Fun (you'll read more about that later), plumbing the engine installation and preparing to start the interior. I should mention that I was working out of London for a period of time earlier in the year, that and the lingering work after I returned to the states took a healthy chunk of progress from the Thorp.

Gary Cotner's old canopy refitted on N118LW, glass was actually in immaculate shape, not bad for being 20+ years old.

While on that subject I made it a point to visit as many Battle of Britain related memorials as I could and was quite impressed with the RAF museum outside of London. For a kid who built just about every model airplane available it sure was a treat to see some of the aircraft that held the air during the Battle of Britain (other than the two we all know). I never thought I'd get the chance to see many of them in the flesh.

On another subject, I've had Wendell Green's Thorp down here for a few months. Many of you know that his airplane has been purging oil out the breather line ever since he had it rebuilt (field overhaul) a few years back. After consulting Lycoming and trying everything they recommended (re-hone cylinders and break them in again, mods to the breather line, lower the oil pressure etc.) with no luck, I elected to pull the motor and have a look under the accessory case. I pulled the cover and one glance revealed the problem. Wendell has a narrow deck engine, on this particular (and I believe all narrow decks) the breather slinger ring (the purpose of this is purely to throw oil aft and away from the breather) is a separate piece that is bolted to the aft end of the cam, later models the slinger is machined as part of the cam. Anyhow the slinger was bent as if someone dropped it, bent it and installed it. So long story short, I repaired the ring put the motor back together, hung it back on and now we're good to go. The moral of the story for me was, make sure you trust the guy building your motor. Personally I just built up two last Fall, one of which is hanging on my new airplane. It's not a difficult project and quite frankly a lot of fun but it does require a fair amount of double/triple checking what you're doing.

Starting to look like an airplane!

On that note I still have a spare freshly overhauled IO-320 for sale. Look in the Classifieds for details.

Back to the project, as you can see from the picture below I have in fact gone to the "dark side" and ditched the steam gauges for this project. I will say it sure makes the install easy and clean. Not much going on behind my panel and it sure is light!

David Read's old Enigma found its way to Houston for use in N118LW; mount next to the EFIS is for an iPad – Mini

Ok I guess I'll shut my mouth now and let you guys get on to the meat of the issue. I can't thank the guys who submitted stories enough! It is greatly appreciated!

Hope to see you guys at Gary Green's place June 7-9th!

Enjoy,
Lee

Sun n Fun 2013 – Lee Walton (most pictures by Karen Read)

Sun n Fun 2013 was again as always a good time but I will say it has become less of a homebuilt event lately and more of a commercial Spring Kick-off of sorts. That's not all bad and in reality most people I know tend to spend more time foraging through the vendors, parts dealers and new product offerings than baking in the sun.

We did have up to 7 Thorps there I believe off the top of my head; Bob Highley, Bill Williams, David Read, Richard Bentley and Doug Shinn come to mind. As usual we had the Bill Williams hosted Low Country boil on Friday afternoon before the night air show. Attendance seemed a bit low for a 50th anniversary celebratory year. Anyone who missed will be expected to bring your Thorp to Oshkosh … **WE NEED TO MAKE A GOOD SHOWING AT OSHKOSH FOLKS!!**

This year's highlight in the product offering area was Garmin's G3X line of products. Basically experimental versions of their certified equipment and priced such that I cannot see the competition holding up.

Here we are at work... note the lab coats!

I chose to fly commercially this year as I had a planned to make a cowl and as it turns out a set of wheel pants from Bill and Bob's molds. Again thanks to Bill Williams, David and Karen Read and Derek Fritschle and Amanda for helping and keeping us company while we slopped away. In the end it took two days to lay up the four piece cowl and two wheel pants, then a morning to box it up and send it home. Thanks again guys!

Lakeland Linder on Arrival – N27DW on approach

Always a sucker for the Hawker Hurricane! I really like this one, a Florida built 5/8 Sindlinger Hawker Hurricane powered by a 160hp 0-320

This was taken by Karen Read on the way home on Sunday … looks like he put his new ADS_B receiver to work!

N718DR Version 2 – David Read

The panel is completely new. I had planned to just rearrange the old components but when I found that someone was interested in buying my old glass panel at a fair price I decided that it would be a good time to upgrade. This is the new MGL touch screen IEFIS. The panel has a backup battery mounted in the back. I also used their comm radio and the Sandia remote transponder. I certainly have all of my eggs in one basket since my only backup instrument is the vertical card compass. I picked up the eyeball vents at the fly market at OSH. My iPad will mount to Velcro in the empty spot on the right. The rotary switch high in the center controls the led landing lights in each wing gap cover. It was intended to be used as a fan switch in a window air conditioner. Positions are off, right only, both, and wig wag. Wig wag utilizes a solid state turn signal flasher and a relay, all done at a very low cost.

The iPad door hinges out with a small rod to hold it in place so the iPad more squarely faces

the pilot if the right seat is empty. In my experience so far storage space for maps, flashlights, water bottles and other small items you would like to have nearby is rarely adequate. There is a space between the iPad and fuel tank that I made one compartment. The larger fuel tank comes all the way aft to the dash frame but more about that later. There is another cover that hinges down to reveal a large glove box. The smaller glove box on the pilot's side does not have a cover because it would interfere with the throttle quadrant. The remaining area behind the panel is taken up with remote sensors and other components.

I wanted to see if I could build a metal cowling. It was very much of a learning process that took a long time. I made the intakes first because I figured they were the hardest part to make so if they did not turn out there was no need to proceed. I took a lot of pictures of Bob and Bill's cowls and asked many questions. I had the damaged cowl for a pattern to work off of.

I modified the shape of the bottom to eliminate the chin scoop. I made a new air box for the carb that is very thin in the front and has the intake in the rear. Combustion air comes from the right rear baffle. I am a bit conflicted yet as to how it will look but I can't go back now. I wanted to try to make as many pieces metal as I could so I made aluminum upper gear leg cuffs and wing fairings. In the future I may try metal wheel pants but right now I just want to get the plane in the air. I can always make them later.

I had also been wanting to try to make metal wing tips. I previously had made Kleber style fiberglass ones so I tried to duplicate them in aluminum. This was my first experience tig welding thin aluminum. These are .025 6061 but next time I think I will use at least .032. The weight penalty would be worth it if they would be easier to weld. I upgraded to LED strobes this time too, no bulky power supply.

I observed that Gary Green had modified the access panel beneath the fin so I decided to take it a step further. The lower section where I had a medium door before is now a completely removable section. I put a #6 screw and nut plate at each rivet location. I also made the skin from .032 and added a couple of stiffeners on the inside.

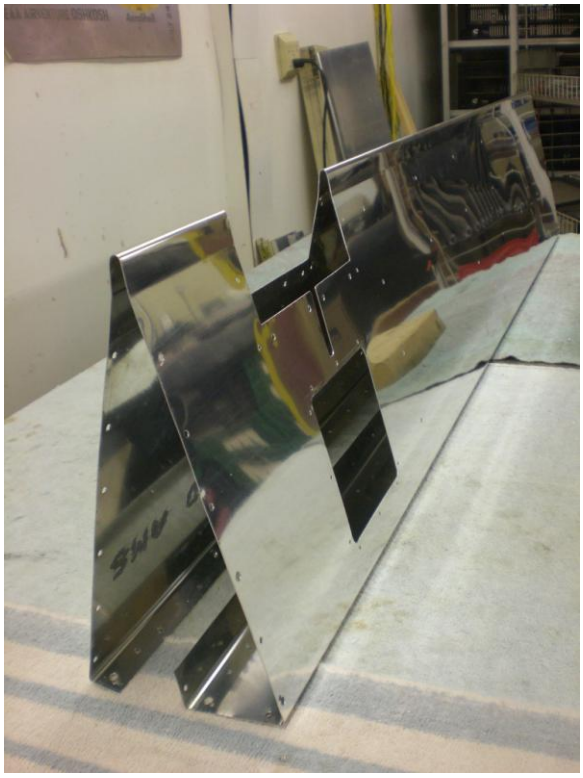
The top section goes all the way down to WL42. I figure this makes a stronger joint plus the seam will not be visible for the horizontal stab.

The top of the access panel continues up and also serves as the trim at the base of the fin. A separate piece forms the trim around the front of the fin.

This is the "kit" after I took off all the damaged parts. The center wing, flaps and horizontal stab were also undamaged. Today I am up to 1200 hours in the restoration although it would have been flying some time ago if I had just put it back together as it was. As usual I could not leave well enough alone, it is going to be a very much different airplane. For ease of service I made some of the belly skin removable as well.

The used exhaust I had purchased before was apparently from an RV so I had to make a bump on the left cowl just below the cheek to accommodate it. For the amount of changes that would be necessary it was not worth reworking the old one. I decided I could build a new stainless exhaust for about half the cost of buying one. I should have allowed more for how long it would take. The local exhaust specialty shop guy made all of the bends for me for $20. The first attempt wrinkled and flattened it terribly so I welded on ends and filled it with sand. It turned out fairly decent after that.

I was looking for a way to get about another hour of fuel somewhere. After exploring several options I decided to make the main tank larger. You can see the difference between the original and the new one here. Not knowing for sure what I would gain I made it as large as I could fit and it turned out to hold 40 gallons so I got more than I asked for. Just because it is there you do not always have to fill it to the top.



Partly to avoid visible seams and rivet lines I made my aileron skins all one piece. I believe it is just as strong this way, I did use .020, and although it was a challenge to do in the brake it is actually easier to build overall. I also like the looks of the folded trailing edge.

NX115RX Panel Upgrade – Rich Brazell

When I first started to put my panel together about 10 years ago the idea of an EFIS panel was not practical or cost effective , so I decided to go with an all electric VFR "round gauge" panel . At the time the only real option was an electric ADI. US made gyros were close to $1,500 and the imports were around $1,000. I found an import at the "Gyro House" in Northern California and went with it. Easy to install as you only had to have a ground wire and a positive hook up. As with all mechanical gyro you have the problem with precession and drift. Getting the unit to gage was also another problem, but comparing it to a vacuum gyro they seem to be about the same as to performance. The other disadvantage is the unit was HEAVY and long. I also ran a blast tube from my avionics cooling fan to help keep the unit as cool as possible. It does take several minutes for the unit to spool up!

Now fast forward to 2013 and TruTrak has introduced the Gemini PFD. A unit weighing only ounces and only 1 inch in depth and will fit in the old Commie ADI hole in the panel . Very easy to hook up. Tap into your pitot/static line and hook up the power to the same power leads I used for the old ADI. To get the most out of the unit you really need to provide an input from your GPS. This will give you accurate heading. The unit is touch screen and you can change the setting from MPH to KTS and also other units of measure. Want to set V speeds you can do that. Set a low AS warning, you can do that. The unit has a lot of options. I did find as with all EFIS type screens sunlight readability can be a challenge at times. Overall it is head and shoulders above the old gyro type ADI's .

Now regarding the other three instruments I installed is hopefully my LAST panel upgrade …

The Flight Data Systems FC-10 Fuel flow computer. What a wonderful little unit! Once calibrated (takes a few tanks of fuel to get it calibrated), it gives me fuel used, flow rate (GPH) and a lot of other options. I like it because it gives me fuel used compared to fuel on board. My Westach fuel gauge is calibrated to within 0.5 gallons. I still need to tweak the unit but right now the FC-10 is showing fuel used compared to fuel put into the tank to be less than a gallon . I would like to get it down to 0.5 gallons or less. The GT-50 is a nice to have unit to replace the Amazon.com digital kitchen clock/timer I had on the dash. Although it worked as advertised it did not look right for my panel…maybe for an Ultra Light? The Gt-50 is a G meter (not sure why I need that), a clock (12 or 24 hour format), timer/stop watch, voltmeter (good cross check with my Westach volt/amp gauge. It also has the option to have an OAT probe (bought that), no need for a separate OAT gauge.

My last upgrade was to install a wet compass. I went with the British SIRS Pegasus panel mount compass due to the ability to read it at an angle in the seat. Mounting this wet compass or any wet compass in the dash can be a challenge. I did not want the standard mounting on the center windscreen "tube" as I like a clear view in front. It took me 3 attempts to get a location where I did not have any "mag" interference. I finally found a location to the far right in the panel and to my surprise the compass did not need any calibration! BOOM! Works 4.0 and easy to read from the left seat. It could be handy should I lose GPS input to the Gemini PFD as it requires a "heading reference" to set the internal compass.

"Thorp Racer" Update – Jim "Cubes" Grahan

Building this "racer" has been an exercise in engineering. We started with one goal, and that was to race and win the Sport Class at Reno. In the six years since starting this project, the winning lap times at Reno have gone up by 20 mph. I'm not whining, I'm being realistic. This aircraft may not end up being competitive in the Sport Class by the time I'm done. That's ok. It is still a blast to take a standard S-18, and modify it to fit me like a glove. I have thoroughly enjoyed the engineering challenges. Here is one such challenge – the retractable landing gear!

The gear design was a fairly simple idea. We started by placing the axel in the exact position called for on the plans. Then we decided to attach them at the wing break for ease of manufacture. The first major challenge was figuring out where they go once retracted. This was literally done with a cut off broom stick with welding rod stuck in it. It took a while to figure out that we had to make the gear leg to torque tube junction greater than 90 degrees. It also took a while to realize that canting the torque tube aft end outboard would retract the gear aft. Sounds logical, but believe me, there were a lot of beers and brain bites to figure that one out. I wanted the gear up position to be as far aft as possible to be able to clear my feet for the rudder pedals. In the end as you can see from the pictures, the main gear bearing is

through a rib made six inches inboard of the outer most rib in the center section wing. The torque tube has an aft bearing riding on a 4130 steel plate bolted to the wing attach fitting. The gear itself is 4130 steel tube that is welded to the torque tube. There is an upper gear leg that carries a lower gear leg slid right inside of it. There is a 2.5 inch Delrin bushing separating the upper and lower gear legs for shock absorption. The pictures show the airplane standing on the gear. It is being temporarily held down by angles and bolts.

The next major engineering challenge was how to retract the gear. I'm not a fan of micro switches or hydraulic plumbing that could leak. So we went with a cable operated system. We milled pulleys out of solid aluminum bar stock 4 inches in diameter. Those are bolted to the torque tubes. Then we ran cables through to inboard ribs and into the fuselage. Inside the fuselage, there are pulleys that direct the cables up, then aft toward a Johnson Bar in the cockpit area. The Johnson Bar is the exact same piece of metal we all have in our original Thorps. It is the flap handle. We milled another pulley that is bolted to the Johnson bar. So, the cable goes from the Johnson Bar through the wing to the "up" side of the right gear, around that pulley, back through the wing to the left gear "down" side, around that pulley, back through the wing and back to the cockpit. It is one, continuous cable with three adjusting turnbuckles on it. It works slick as you please.

Houston we have a problem. We both knew that holding the gear in place (either up or down) with a cable is not a good idea. Cables stretch. Even with the cables tensioned, I could still grab the gear and move it several inches inboard and out. Ok, so we had to design a gear lock-down mechanism. No problem. The simplest solution we could come up with was to shove something laterally outboard straight through the torque tube to prevent it from, well, torqueing. After six months of designing and building, failing, redesigning, failing, and redesigning, we had a system that had two cockpit levers, when slide outboard would shove a push/pull tube connected to an AN-6 bolt straight through the torque tube. We even milled fairly sizable aluminum blocks that were bolted to the torque tube side of the outer most ribs to take up space and not allow to AN-6 bolt to move. The torque tube has a smaller tube welded inside it to provide a thrust surface for the AN-6 bolt to have more contact area. It failed. The latest iteration still allows ¾ of an inch movement at the axel. That is way too much to provide a stable landing gear on the ground. I won't tell you the words I uttered when I measured that! So where are we? Well, in my opinion, we learned a lot. The gear itself is outstanding. It is strong, light, wider than normal, and has shock absorption to it. The lockdown pins were a good thought to fix a problem generated by using cables to retract the gear in the first place. Therefore, I intend to rip the whole retraction mechanism out and start over. My latest thoughts are using ACME thread gear to drive and hold the landing gear in any position I want. The trick is to design a system that is tough, precise, and reliable. I'm working on it. If you want a clue as to the resource for this change, check out the NOOK Industries website. If it was easy, anyone could do it! For now, the gear is on the back burner while we build a mount for the MONSTER engine!

cubes

Scat Tip – Rich Brazell

If your SCAT tube is getting a little ratty at the clamp end use a few raps of F-4 self fusing tape to mend it. It also comes in Red, but black is what I had. Temp range for the tape is almost the same as the tube, 500 degrees. I carry a small roll in my fly away kit should my tube spring a leak (hole). The price of 2" SCAT tube from Spruce is now $7.00 a foot. A few raps of F-4 tape about .75 cents? Priceless!

Fuel Tank Construction, The Dixie Fried Fabrication Way– Brent "Lou" Junkins

When Brent "Lou" Junkins, owner of Dixie Fried Fabrication, read in the forum that a fellow T18 pilot wanted a metal tank, he figured he'd give it a go. Lou has over 20 years experience in metal fabrication, and this represented a challenge that could provide useful experience if he ever decided he wanted a new tank for himself. A well-built gas tank is an important element of every aircraft. He wanted to document the experience to offer an insight into the task, and to hopefully help out other interested T18 owners.

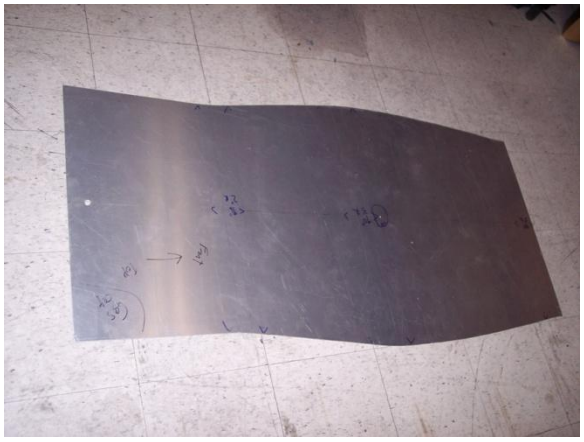
Build Forms and Fixtures

The first step was to build the forms and fixtures. This takes nearly as much time and effort as building the tank itself—but you only have to do it once, if you do it right.

With the generous assistance of a good friend with a professional wood-working shop, Lou built the tank body buck from layers of flake board alternating with 2x4 block spacers. The hammer form used to hand-hammer the sheet metal into the desired shape for the end caps was made from laminated oak. Because the tank is asymmetrical, left and right side end cap forms were needed. Lou made a single 2"-thick form, one side for the left and the other for the right.

Make Template

Working from the plans, Lou made full-size measurements from plotted curves. First he worked his template on heavy paper, and then replicated it on more durable aluminum sheeting, which makes for safer storage and longevity in a shop environment.



An additional ½" of material was added to the front side of the tank pattern, so when the seam is in the proper place, the additional

material under laps to the rear. For the end caps, additional material was calculated as well for the flanges (which is not included in the plans, being a flat pattern). Lou allowed for 1/4" additional material. This addresses overlap of the end cap on the tank body. It is important to be very accurate with the calculations, because a lot of metal is being moved for the end caps, and you don't want to have to move any more than you have to.

Then Lou transferred the pattern to the tank material (6061 T4 aluminum). When he cut it out, he made sure to leave a straight, smooth, burr-free edge. Afterwards he punched the holes, which is of course much easier when the metal is flat.

Form Body

Patience is a vital part of forming. Lou says, "The key is to sneak up on it, to avoid those unnecessary creases."

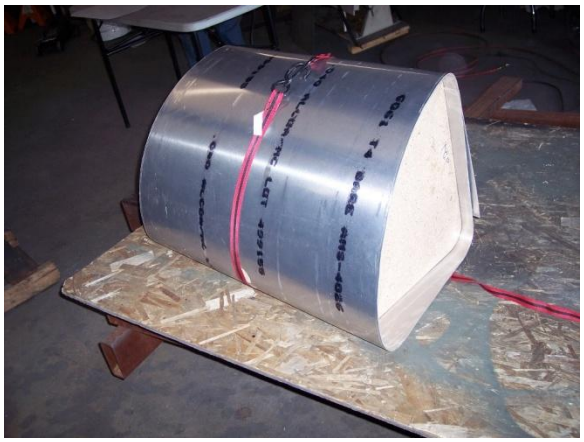
Tools used: 6' lengths of 2", 3", 6", and 8" pipe positioned vertically on XXL jack stands.

Pipes

Bend radius' are in the plans and were transferred to the template.

Lou then chose the bend he wanted to work, and the best size pipe to use for it. Gently and slowly, using his hands and forearms to press the metal into shape, he constantly checked his progress against the buck. Back and forth, gently press, back and forth, gently press a little more, test on buck, until each of the three bends were complete. Once that was finished, he wrapped the tank material around the buck with the under lapping edge from the extra 1/2" of material mentioned previously. Lou used the last ¼" of under lap to make a 45-degree angle flange to stiffen the seam for welding.

The material was strapped in place around the buck with cargo straps, and Lou drilled holes and cleco-ed every two inches along the seam.



Tank Start

Form End Caps

Did we mention that patience is a vital part of forming? Just checking.

Lou staged the forming by placing the oak end cap form on the welding table, and carefully positioning the aluminum piece over it. On top of the metal he placed a blank cut from EMD board in the shape of the end cap, and then he clamped it all very securely to the welding

table. ("I clamped the sh*t out of it!" says he.) After securing it all together, he went around the protruding flange and warmed it with the torch.

A lot of different hammers can be used for this task—rawhide, wood, or plastic. Lou chose to use a block of oak and a ball peen hammer to drive it. Working from the inside edge of the flange to the outside edge, he moved the metal down over the form, making multiple passes for both annealing and hammering.

The metal will start to pucker at the curves and at the three corners. Puckers are the devil! Lou did not let the puckers fold over onto themselves. He paid particular attention to the corners. The aim is to shrink the metal into itself. Using the oak block, he hammered around the pucker, isolating it and working into it, hammering it down flat until it disappeared. Repeat for each pucker. Time for another pass: Anneal, hammer down, work puckers out.

This stage takes many passes. It requires--patience! The fabricator cannot be in a hurry. Anneal as often as required to avoid cracks. Hit too hard and the metal thins. Puckers can't get too big and fold over. Lastly, the form must stay

clamped down tight and not set on fire (too much).

Once the piece was hammered down tight, Lou dressed his tools and…made several more passes to plenish the flange smooth over the form. Once the flange was smooth, he measured the welding table to where the tank flange end should be (remember Lou had allowed for ¼" additional material), and scribed a straight line all the way around the tank cap, using the table top as a reference.

Finally everything got unclamped, and Lou removed the cap from the form and trimmed down to the scribe line. He fit the end caps to the tank, drilled holes and cleco-ed every two inches along the seam.

Sending Unit

The sending unit plate was cut out of 6061T6 aluminum, 0.125 thick. Lou tapped mounting holes for the customer-supplied sending unit and located the mounting plate, clamping it in place with mini C-clamps and tack-welding it into place. He repeated the process for the filler cap, which was a locking, non-vented cap by ACS Products.

Install Bungs

Two threaded bungs were installed.

Plan Deviation

John Thorp's rule for gravity feed system is to use 3/8" fittings. Plans called for a ¼" female pipe threaded bung. Lou installed a threaded bung with 1/2" female pipe thread. He wanted to install a finger strainer into the tank, which reduces the diameter to 3/8". From there on out 3/8" fittings were used. Then the bung was tack welded into place.

Install Vent

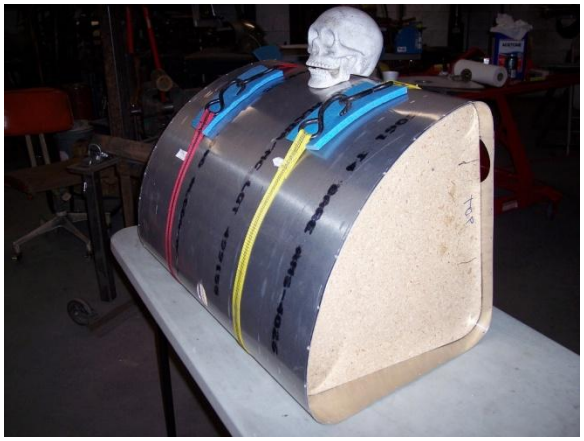
The plan calls for 3/8” aluminum tubing.

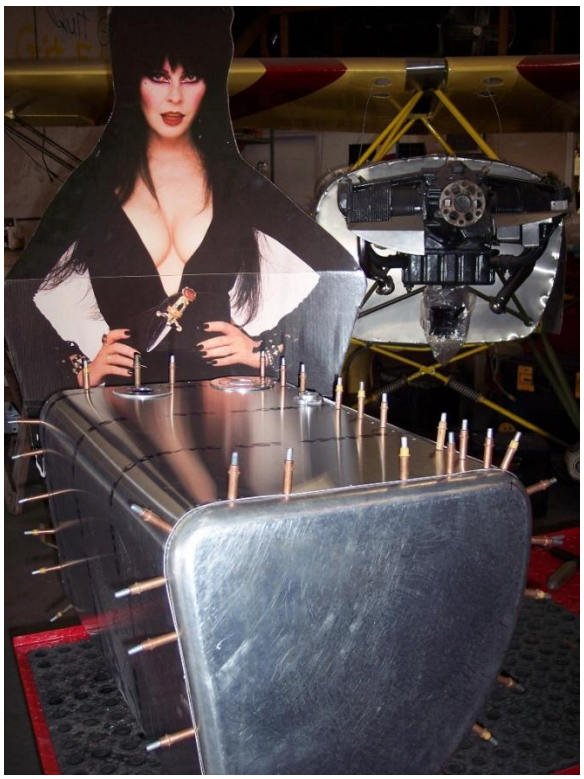
Plan Deviation

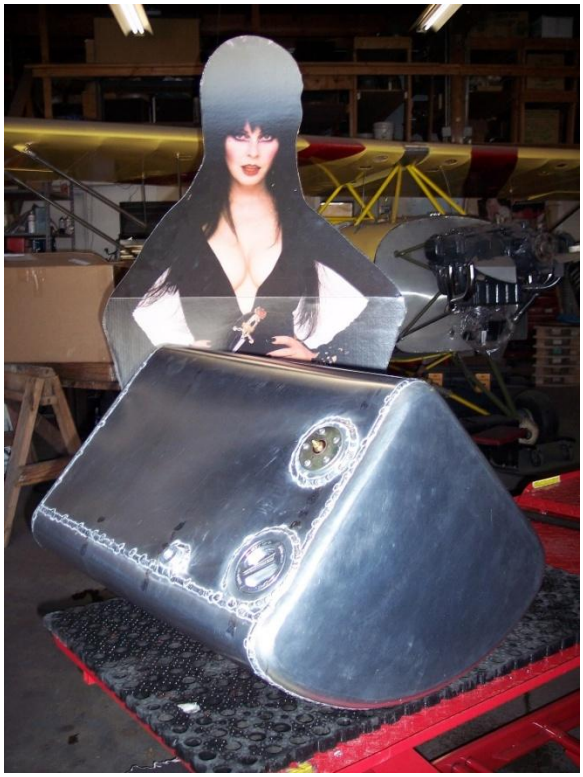
There seems to be a problem with that tubing getting placed too far down into the tank. The tube is supposed to have a hose and clamp over it. Lou wanted something more robust and permanent, so he welded a threaded bung for a 3/8” female thread, giving the customer the option to run the vent line with AN fittings. This combination creates more bulk, so care has to be taken to make the fitting low-profile enough to fit below the fuselage skin.

Final Welding

All the seams were tack welded, all clecos removed, and then the seams were cleaned and prepped for welding. Lou recommends using the smallest electrode, the thinnest rod, and the lowest heat possible.







Lou welded up the bung on the outlet. He made a square panel from the same material as the tank, and put a hole in the center to clear the just-welded bung. It was shaped to fit over the tank, around the bung. It was drilled, cleco-ed, tack welded, and clecos removed.

Drawings show the tank shutoff valve hanging from the bottom of the tank. Over the years, cracks develop around the valve. The extra-large 1/2" bung and reinforcement patch will hopefully eliminate that problem.

Lou finished the welding and used a solution of soapy water and a couple pounds of air pressure to test seams for leaks, twice. While he pressurized the tanks, he used cargo straps around the body to prevent ballooning. There were no leaks detected.

Final notes

While this was a satisfying project with solid results, it was certainly time-consuming and a bit of a challenge.

June 7-9 - Spring Gathering, 2013 "The Valley" Cotter AR – Gary Green

If you have not attended one of our previous events here; "the Valley" is 61AR and on your K.C. sectional near Mountain Home, AR. The Marion County Airport (KFLP) is just south of us.

In fact when you are on right downwind to land on our runway 10 you are also on a wide left base for runway 22 at KFLP. That is one reason our pattern is flown at 1100'—it keeps you well below any traffic that may be going into KFLP. Our runway 10-28 is 2800' x 25' and the elevation is 450'.

Our pattern entry is from the north and one should overfly the center of the runway, observe the wind socks/tee and turn left to enter left downwind for runway 28 or turn right to enter right downwind for runway 10. The steep bluff on the north side of the valley predicates all patterns on the south side of the White River.

If landing on rwy 10, a grove of trees will obscure the touchdown zone while you are on base leg. Don't sweat it, just follow the valley floor as it curves around and it'll line you right up with the runway. It is common for first timers to end up too high and have to go around on their first attempt to land on runway 10.

We have several neighbors offering spare bedrooms to our T-18 bunch and I suspect we can accommodate most of you in their homes right here.

If you have your heart set on going to a motel, I think I'd recommend going all the way into Mountain Home. There is a motel in Gassville, but I do not recommend it. There are several nice motels in Mountain Home.

Some of them are:

The River Rock Inn (870-425-5101) at 1350 hwy 62W
Ramada Inn (870-4259191) at 1127 hwy 62ESuper 8 (870-424-5600) at 865 hwy 62E
Executive Inn (870-425-2300) at 869 hwy 62E
Holiday Inn Express (870-425-6200) at 1005 Coley Drive
Hampton Inn (870-425-0344) at 995 Coley Drive

I would appreciate emails from each of you telling me which day you expect to arrive, if you are by yourself or a couple and if you want to stay with one of the local neighbors. That will sure simplify planning.

I think we'll have a burger burn or fish fry on Friday evening, a pancake breakfast Saturday morning, and a low country boil on Saturday evening.

Gary Green
ggreen533@centurytel.net

Oshkosh Information – Lee Walton

Here's what we have so far going on at Oshkosh Airventure 2013

- Possible time slot for all Thorps to **arrive together**, I will send out a mass e mail regarding this when more details come in.
- **Reserved Thorp parking**
- **Formation Routine** led by Jim "Cubes" Grahan, day to be determined but were shooting for Wednesday but at this point their giving us a slot on Monday 7/29
- **Thorp Review** in the Homebuilders hangar as of right now this is planned on 7/31
- **Thorp Forum/Lunch** 8/1 in the Nature Center Tent #1 12:00-2:00 this will be a catered event this year (and most likely from now on)
- **Thorp Dinner/Awards Banquet** Roxy Supper Club 571 N. Main, Oshkosh

Keep an eye on the Forum and or T-18.net as I will be keeping it updated as things get closer.

-Lee

A **BIG** Thanks to David Read, Rich Brazell, Jim Grahan and Lou Junkins for their contributions to this issue of "Tiger Tales". Notice the same names appear in each issue! Thanks for the help

guys. I could not put this together without your input!

CLASSIFIEDS

FOR SALE -Engine Instruments!! – Rich Brazell

In order to install the FDS gauges and the wet compass I had to double up on a few gauges…Oil pressure/oil temp, Volts/Amps and EGT/CHT. Everything is working as advertised (less than 50 hours on most of the gauges) and should someone need a Westach Gauge…

Oil Pressure gauge 0-100 psi (no sender)
Volt Gauge
AMP Gauge (no shunt)
Oil Temp Gauge, no sender
EGT gauge, no leads or probe.
CHT gauge, no leads or thermocouple.
Hobbs Meter (shows 1.5 hours from being installed during bench testing)
Import wet compass.
Import 12 volt ADI. Has Canon plug connector.

All the gauges were bought from Spruce (except ADI from the Gyro House) and were working perfect when removed to panel up grade. Included is a picture of my early panel with the above gauges. They have not been abused!

$25.00 for any gauge (except the ADI) and I'll ship USPS. Multiple gauges may require a larger USPS box. I guarantee the engine gauges to work as advertised. I love my Made in the USA Westach Gauges! No problems and as far as I can tell they are very accurate!

Should some like to buy the Falcon electric ADI (I am assuming it is a Falcon import) I can bring it to a fly in and you can test it. The suckers are now going for $1,598.00 at Spruce! I will not sell it unless you can test it. $500.00? Only has about 100 hours on it.

All gauges are non-TSO and if you want the Spruce P/N to look up a gauge let me know.

Contact Rich Brazell

E-mail rx115@cox.net (H) (619) 669-0583

IO-320 B1A For Sale

Lycoming IO-320-B1A, 1785TT, 0 SMOH. No expense was spared during overhaul. Cylinders by Sal's Aircraft Cylinders, all other reconditioning by AEA. Very complete logs. No prop strike, No accessories. Make Offer! Contact Lee W. Walton, Owner - located Houston, TX USA Telephone: 713-303-1043.

Carbon Fiber Spinners

I'm still making carbon fiber Thorp Spinners/Back-plates.

$250 plus shipping

Contact: Lee Walton leewwalton@yahoo.com 713-303-1043