T-18 NEWSLETTER



First flight was Christmas Day '96, about two weeks after N18WX was the River Valley Pilots Association float in the Russellville Christmas parade. The most common remark heard was parents telling children "It's not a real airplane."

IN THIS ISSUE:

SPRING FLY-IN at Coles (MTO) ILLINOIS, June 6-7-8 FIRST FLIGHT by Jack Waxenfelter (N18WX) FLIGHT REPORT by Joe Gauthier REPORT ON THORP KITS by Richard Ecklund NEW OWNER OF N338Q by John E. Bridges

Master Index for the past 100 Thorp Newsletters by Jim Strickenberger

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.

THORP SPRING FLY-IN

AT MATTOON-COLES COUNTY ILLINOIS (MTO)

June 6-7-8, 1997

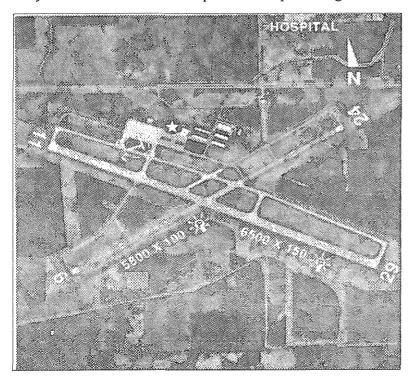
Make your reservations early at the Mattoon Ramada Inn. Ask for the Thorp Convention and you will get the \$49 rate. **Phone: (217) 235-0313**. For those arriving on Friday we will get together and go to dinner that evening. On Saturday evening we are planning a cookout at the large hangar. There will be lots of things to do, for those who do not care to eat, sleep, breathe and talk T-18s. Mattoon is very near the heart of Illinois' Amish community and we can arrange a side trip there for lunch on Saturday. The Amish have a lot of interesting shops to visit. For the rest of us:

- * A lot of T-18/S-18 rides
- * Thorp safety inspection, by EAA Technical Counselor (results private)
- * Saturday afternoon hold a Thorp flying seminar a group discussion with safety suggestions

The FBO is very good about Unicom calls and will give you the winds and active. The airport has extended a big welcome so come on out to Illinois and pay us a visit. You can camp on the field.

Bring you own tie-downs.

Coles is a busy airport with lots of folks stopping in for Saturday and Sunday restaurant visits, so keep a sharp eye out for traffic. Remember the right hand patterns. And please no aerobatics over the airport. We will have several shuttles running from the airport to the Ramada Inn. It's about 3 miles away. The Decatur EAA Chapter 274 is sponsoring this event and will help out.



Unicom -- 122.7 Elevation-- 721' Lat: 39 28.68' Lon: 88 16.81'

VOR -- 109.4 on field

Fuel: 100LL FBO:

Central Illinois Air Corp (217) 234-8146

Runways-Right hand patterns for runway 11

runway 11

Left hand for others, this is to eliminate noise in the hospital area north-east of the airport.

Excellent restaurant on the field

EDITOR'S TRIM TAB

It's on to Sun-N-Fun:

Thorp fans from all across the country will be gathering at Sun-N-Fun for the big Thursday evening cookout, at the President's Event Tent. The Sun-N-Fun folks will award a "John Thorp" trophy for the best Thorp at the fly-in. I understand Bill Williams has been working for weeks building a giant mobile B-B-Q grill for this event. So let's all join Bill and the other Florida folks for this great get-together. Mike Archer of Classic Sport Aircraft will be in booth #31 so pay him a visit. Mike will also conduct the T-18/S-18 forum on Tuesday.

Oshkosh 97 News:

Currently no Friday evening banquet is planned! Butch's is no longer open. So we don't have a place to hold it. We are doing some checking and will let you know in the next newsletter. Any suggestions on banquet, please call me. Friday Noon: At the Nature Center we will again cook Brats and serve lunch followed by the T-18 forum. Please join us there.

Bad News Department.

Our friend Bill Essenburg of Viroqua, WI was killed in the crash of an antique (rag-wing) aircraft. The crash occurred near Moriarty, New Mexico on February 3, 1997. Bill was a fine fellow and we will all miss him.

It sadens me to have to pass on the news that Ed Ludtke's wife Jeanette passed. Jeanette and Ed have attended most of the T-18 events for a number of years and we will truly miss this sweat lady. Ed's address is 2301 Dartmoor Sioux Falls, SD. Phone (605) 361-2301

Finally: Marvin Crane was killed in the crash of a T-18 at Brown Field, San Diego on Jan 25, 1997. I didn't know Marvin but still all of us in the T-18 community feel the lost of this individual. I have the following report from EAA Flight Advisor Jack Keyton Subject:

Fatal T-18 crash:

Lost one at San Diego area's Brown Field on

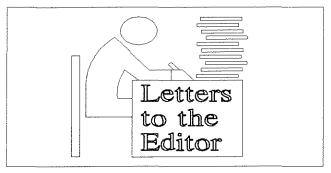
the 1/26 weekend (N40918). Info is that it had 2 on board and was in T & G pattern. On x-wind after t.o. an engine problem & emergency was declared. A/c crashed into an empty shed, 1/2 mi from the airport. Pilot fatal, pax serious. Preliminary indication is low-level stall & uncontrolled ground contact. It's a perennial problem with the pilot community. It may not be what happened, but pilots frequently try to save the machine (by stretching a glide) and losing their lives. We have to change the mentality. Perhaps do a bit more proficiency evaluation of the glide speed on our Thorps, check out altitude loss in a 180 turn. What angle we want to fly it, what airspeed. I once flew wing on a Porterfield doing about 75 mph. All was fine until I followed him into a 180 turn and the Thorp did a 1/4 turn stall/ spin and lost 600' in 5 sec's. Jack Kenton, EAA Flight Advisor & CFI, inheritor of T18, N921JK ifkenton@themall.net

Another report on the accident:

Crane Accident:

It appears that it is important to repeat the information in the newsletter, that the fuel system must be properly configured and tested for adequate flow rates prior to first flights. Then there should be adequate diligence during operation to assure the vent system is functioning. The Crane T-18 had apparently been experiencing fuel flow problems during full power climbs since it first flew in december 1995. The aircraft was consumed by fire with the exception of the wing tips and empenage, making it impossible to positively pinpoint the fuel flow problem. The only evidence of a fuel finger strainer was some fresh solder in the vicinity of the fuel outlet. The recently added boost pump and position of the gascolator in the system was unconventional. Apparently there was a parallel path for fuel directly from the tank to the carburator without the benefit of filtering. Lyle's article in NL#58 page 11 gives good guidance on flow testing. It should be pointed out that for gravity flow systems certificated aircraft must meet a flow rate of 150 percent of takeoff power fuel flow(part 23.955(b)).

Richard Eklund, Eklund Engineering, Inc.



Dear Richard,

Just finished the annual "condition inspection" on my bird a couple of months ago. I think I'll do another in less than a year, to get it into warmer weather time from now on. I've now got about 500 hours in a little over 6 years, and decided to pull all the tail feathers this time, even though everything was still feeling good. I did something a little different to the horizontal tail pivot bushings. I machined some thin (.032") sleeves out of 'moly" filled nylon bearing material which I installed between the aluminum lugs and the steel bushings. This resulted in a very smooth and tight bearing which should require no further lubrication. Only time will tell how well it holds up. I had previously done the same to the rear bearing of the stabilator push-pull tube, and also the rudder bearings, over a year ago. I think the flap bearings would be excellent candidates for the same treatment. The material machines very nicely, but requires some practice and experimenting to get the proper clearances. I like the sleeve to push snugly into the aluminum, and rotate against the steel bushing.

I wonder if you could mention that I have more hats, and also visors, with the T-18 logo for sale. The caps in the color I have were very popular at the Placerville fly-in. They are a high quality golf style cap with leather adjusting strap (one size fits all), in tan with a blue denim bill. They are \$12.00 each. The unisex visors are available in 2 colors - navy blue, or white. \$1 1.00 each. Add \$4.00 for shipping and handling (priority mail) for up to 6 visors or 4 caps.

Some guys were asking about the rudder to tailwheel spring modification that I made. I have stainless steel "compression" type springs,

and wanted to get rid of the little 'teardrop' clips, after having one come loose once. As you know these springs consist of 3 parts - the spring and 2 removable "links" (for lack of a better term). I merely made a new one, of these (links) for each spring, elongated to the exact length I wanted, and elimated the clips. The material I used, which I think is ideal, is 1/8" #308 S.S. welding rod. This can be bent and formed, and has sufficient strength and "springiness".

I'm still making & selling a lot of cabin heat boxes. You can buy them directly from me for \$50 + \$4 shipping & handling. They are light and have a stainless steel door and hinge assembly. Best Regards, (303) 420-2724

JREVENS@AOL.COM



Dear Rich,

I've just finished making and installing a pair of static ports as described in newsletter 91. They're similar to those sold by Aircraft Spruce & Specialty for \$15.00 each but I have a few extra sets that I will sell for \$20.00 a pair and I'll pay the shipping. They are used with 1/4" Nylo-Seal airline and fittings and are easily installed with four 3/32" rivets.

I've also just finished making my canopy frame and would be glad to talk to any other builders that are contemplating doing so. I also machined two aluminum fittings that replace the front angled piece where the front bow and side rails meet and must be welded. The bottom part is idential in shape for mounting the bearings. I've reamed out a 3/4" hole for each tube so that when you mock up your frame the top bow and side rail are slid in place and you can either have them welded when done or held in place with a roll pin. It made it easy to hold everything in place and the only welding was on the cross brace for the rear bearings. If anyone would be interested in using the

The handling of the airplane on first flight was a non-event; it flies just like Bill's! I even got a smooth touchdown. The thrilling part was as the RPMs built on take-off roll, the engine started to smoke from both stacks and actually started to get rough before I got it leaned. It turned out that from a setting on the mixture where it didn't smoke to too lean was about one and one-half turns on the vernier! The local AI ensured me that his replacing of the acceleration pump shaft packing (little ring of leather) would fix this weirdness.

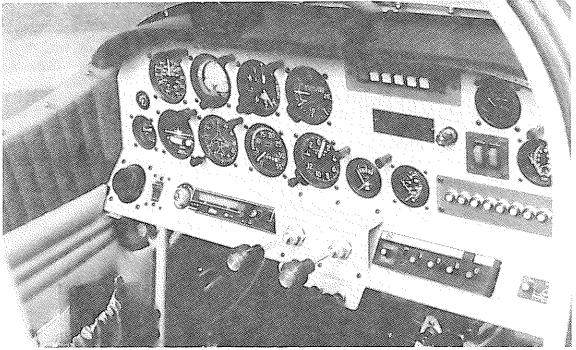
The second flight was just like the first (smoke), so it was ground this bird until we get to the bottom of this. The AI could find nothing wrong with the carb. I contacted the factory guru at Precision (as you suggested, Richard), and he was very helpful (a fellow named Allen). He says there are only three things that can cause rich mixture on an MA-4:

- 1) priming system leaking into cylinders.
- 2) acceleration pump shaft packing.
- 3) acceleration pump discharge check valve not holding.

With the above three items eliminated, we suspected air volume so we removed the C-150 air filter I had adapted to the front of the Ken Knowles supplied air box (real flat one). Well, that didn't do it, so we removed the air box entirely and voila!, no smoke. The suspect now switched from volume to some weird air flow pattern, turbulence, or resonance in the air box.

T-18ers, listen up! Bill suggested we try a simple flow vane below the carb. inlet. In about thirty minutes, we fabricated a flat plate that was riveted across the bottom of the air box and was curved upward (bent) smoothly 90 degrees and then mates with the rear box mounting flange. A clearance hole was provided for the carb. heat push-pull rod. Details on request! This was the fix, folks—no more smoke and picked up 100 RPM. Engine now leans normally. I believe that the square end of the air box can set up a "rotor" that will restrict smooth air flow into the carb. I have read many tales of 0320s in T-18s running rich and the owners resorting to all sorts of re-jetting and nozzle swaps—possibly, not necessary??

So—the adventure continues. I have flown off half of my 40 hours and love my T-18. Hope to be able to make several T-18 fly-ins this year! Keep up the good work on the newsletter,



Builders take note of Jack's beautiful instrument panel. My wife will be on my back to add a couple of those cabin air vents. Nice job Jack.

```
SHEET METAL MAT. LIST----1.17
SKINS----1.2.12, 15.7, 22.8, 23.6, 26.6, 47.14, 49.8, 50.3,52.1A.5B.21A, 55.10A, 56.20A,
          62,20, 62,20, 63,3, 64,12, 76,12, 78,15, 90,10
SLIP JOINT (EXH)----29.3, 37.9
SLIPPER TANK----47.7, 56.19A
SOUND PROOF (SEE NOISE RED)----19.2, 21.5, 24.7, 44.3, 46.2, 61.7, 79.18, 93.17
SPAR CAPS (C-WING)---47.9, 90.10
SPINNERS----16.3, 24.6, 31.9, 47.18, 54.22A, 56.20A, 63.17, 65.2, 25.26, 66.8, 67.11, 68.9, 69.16,
               70.3, 71.25, 73.5, 75.3.4, 76.3, 82.6
SPLINE CURVE----1.24
SPEED (MEASURED)----40,4
SPEED (MANUEVERING)---35,10
SPRING, TAIL ----29.4, 61.2.20.21, 62.6, 66.13, 67.11, 70.12, 74.10.11, 71.4, 98.16
STAB JACK SCREW INSP. OPENING----52.9A.11A
STABILATOR ----69.23, 47.14, 82.16, 93.3.7.9.14, 100.2
STALLS---24.2, 27.10, 49.4A, 59.27, 61.4.5.6, 62.7, 82.4, 85.14
STALL SPOILERS----24.2, 25.4.7.13, 26.1, 28.10, 41.3, 49.4A, 61.4.5.6, 62.7, 81.14, 82.4, 91.12, 93.16, 96.4
STATIC PRESSURE----19.3,44.4,61.5
STIFFENERS----71.8, 90.10, 99.10
STRAKES---49.4A, 50.2, 58.6
STARTER/STARTER DRIVE----82.3, 84.9
STARTER SOLENOID----82.3
STATIC/PRESSURE PORT----91.9
STROBE LIGHTS----67.17
STROKE, BORE & H.P----34.1
SUPPLIERS, PARTS ----95.15, 98.6.7.8.18, 100.3.4
SWITCHES----73.15, 94.15.16
                                                        T
T-18---60.8, 83.3, 85.14, 94.17, 98.1
T.C.P---45.13
TACH CHECK----59.29
TAILPIPE DRAG----60.13
TAILWHEEL ---- 25.6, 26.1, 29.2, 34.1, 37.2, 41.1, 48.8, 50.4, 59.11, 60.9.15, 61.2.7, 61.20.21, 62.6,
                 66.13, 67.11, 70.12, 71.4, 74. 1 0.1 I
TAILWHEEL SPRINGS----98.16
TAILWHEEL TOWBAR----53.17A.17B, 58.10
TAXIING----98.11
TEMPLATES----1, 1, 18,6, 29,1, 51,2A, 52,14B, 100,4,5
THE T-18----60.8
THIRD SEAT----48.1, 49.6A
THORP LEGACY----89.18
THROTTLE QUADRANT----69.18.19.20
TIE DOWN----34.3,68.15,71.19
TIPS FOR BEGINNERS----35.1
TIRE PRESSURE----59.20, 88.16
TOOLS----1.3,8.9.19, 17.4, 21.3, 22.1.2.5, 26.1.9, 28.4, 37.5, 38.3, 39.2, 39.4.6.8, 40.1, 42.4,
       46,6,19.8,9.20, 56,12A, 65,21, 75,13, 65,26, 54,14A, 55,8A,10B, 59,12, 67,19,20, 77,3,15
        75.12, 78.18, 82.7, 84.6, 96.8
TOROUE----88.13
TRAILING EDGE----37.1, 47.13, 48.5, 52.2A, 65.4, 76.10, 82.15, 93.12
TRIM (MANUAL)---16.2, 17.1, 23.2, 25.3.5, 31.7.8, 32.4, 34.5, 41.7, 42.6, 44.3, 5 6.9A, 95.14
TRIM (ELECTRIC)----31.8, 44.3, 46.15, 47.15, 49. 10A, 54. 10B, 56.15B, 60.11, 61.7, 62.6, 66.10, 67.7,
                      69.7.8.11, 73.15, 74.8, 76.2, 80.13, 96.9.10
TRIM TABS---46.16, 93.3
```

TUNNEL (AFT) 13.4, 36.1, 46.14, 49.8A, 61.6, 69.11, 73.17 TUNNEL (FWD) 24.5, 46.14, 49.8A, 53.8A, 61.6, 69.11, 73.17

U

UPHOLSTERY 68.13, 82.7

 \mathbf{V}

VACUUM FORMING 63.4

VACUUM SYSTEM 19.3, 24.6, 66.9, 72.5.6, 84.7, 97.13

VALVES (ENGINE) 18.4

VENTS 56.15B, 73.18 VENT LINE (FUEL) 58.12,60.12, 87.5

VERTICAL FIN 1.13, 14.3, 33.1, 52. 1 A, 56.20A

V.N.E. 57.4, 80.7 VOLTMETER 52.15A

W

WEIGHT & BALANCE 27.8, 44.4, 61.3.8.9, 63.22.24, 93.3

WELDING 19.3, 29.3, 34.6, 39.6, 60.4, 61.10::13, 64.12

WHEEL PANTS 25.9, 41.4, 54.11A, 65.16, 80.13

WHISTLE SLOT 59.30

WIDE BODY 44.2, 46.10, 50.3A

WINDSHIELD/FRAME 15.5, 22.1, 23.6, 50.4, 52.1 1 B

WING (CONV.) 25.13, 32.5, 38.3, 39.8, 41.1, 42.1, 42.5.6, 43.3.4,

45.7, 46.10.13, 47.8.9, 49.4, 50. 1. I A.2.3A,

52.5B,54.3B, 56.3B.7A. I IB.20B, 62.20.21, 63.12.13,

65.17, 71.22, 78.7, 79.20, 89.7, 90.10

WING (STD) 23.6, 24.2, 25.6.7.13, 26.3, 26.3, 27.10, 32.5, 38.3

39.6.8, 41.7, 42.2.3.5.6, 45.5.16, 46.1, 49.3A,

52.5B, 56.7A, 56.20B, 62.20.21, 63.3, 78.15, 90.10

WING LEVELER 69.11,47.2.13

WING PROFIL 90.5

WING-STRAKELETS 49.4A, 50.2, 61.4.5.6, 62.7

WING TIPS 22.2, 62.5, 67.4, 69.5, 71.22, 76.10.11.12, 93.18, 95.5

WING (WET) (S- 1 8) 51.8A, 62.5, 63.16, 69.12, 71.22,73.1 1

WIRING 82.7, 94.15.16, 97.9

Email from members

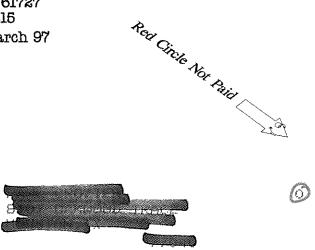
Rich, what flyin is happening on June 7,8. Guess haven't heard about that one. I am planning to make Fun/Sun if I can get some projects finished before time to go. J'nene and I spent the weekend with Evan/Virginia Roberts at Horseshoe Bay, down in LBJ hill country, He really has beautiful new home on 4500 ft runway. Evan bought two Sidewinder projects, I will build him a souped up 0290 for it. He is really flying his Thorp, makes lots of business trips and doesn't let wx shut him down. I have been trying to learn how to land mine again, my air time during the past year has been almost nonexistant. The T-18 proficiency is directly proportional to the time spent in the cockpit. Evan and I were discussing the cross wind characteristics, we have both landed in severe crosswinds up to about 25kts and almost 90deg across the runway. After a safe landing, and you are rolling out thinking "that was a walk in the park" you really give credit where it is deserved, the great design genius of John Thorp and the resulting T-18. Keep up the good work on the newsletter, we all appreciate your effort in that regard. Will send you a check for 97 dues, I believe you have my current address, if not is is: 1013 Melrose Dr., Waco, Tx 76710, 817/772-6188. Best Regards. Ken C. Morgan N118KM

Newsletter No. 102

LOVE

LOVE 55

T-18 NEWSLETTER ROUTE 3, BOX 295 CLINTON, IL 61727 1-217-935-4215 Issue #102 March 97



Spring Fly-In at Coles Country Airport in Illinois on June 6-7-8, 1997 Details on page 2

Thorp T-18 For Sale: 360 TTAF, 50 on Mattituck overhaul. 150 hp. Full Gyro Panel. King radios. Contact: Scott Keller Lincoln, MA. (617) 259-3153

T-18 embroidery on jackets or shirts. Too many variables to cover in the T-18 MAS. Contact Bill Mitchell, 526 Leona Dr. Denver, CO. 80221 (303) 427-4025

For Sale: Lee Skillman's Thorp Widebody Project is for sale. This is a great buy, priced at the cost of parts. \$13,500 Lee does great work so if you are looking, check this one out. Lee also has an all metal Thorp cowling for sale at \$1500. Phone: 334-633-3535

Only 1/2 of the dues are currently in. A red circle means I don't show you paid.

THORP T-18/S-18 MUTUAL AID SOCIETY 1997 DUES Please continue your support of this valuable exchange of ideas, building tips and safety information covering John Thorp's great design. Make checks payable to Richard Snelson, Route 3 Box 295, Clinton, IL 61727 \$25.00 US, \$30.00 other. Name: Address City: State Zip Code: Phone: Aircraft: Email address: Notes: (Building?, Flying?, Thinking about it?etc.) Please help by sending your dues in now!